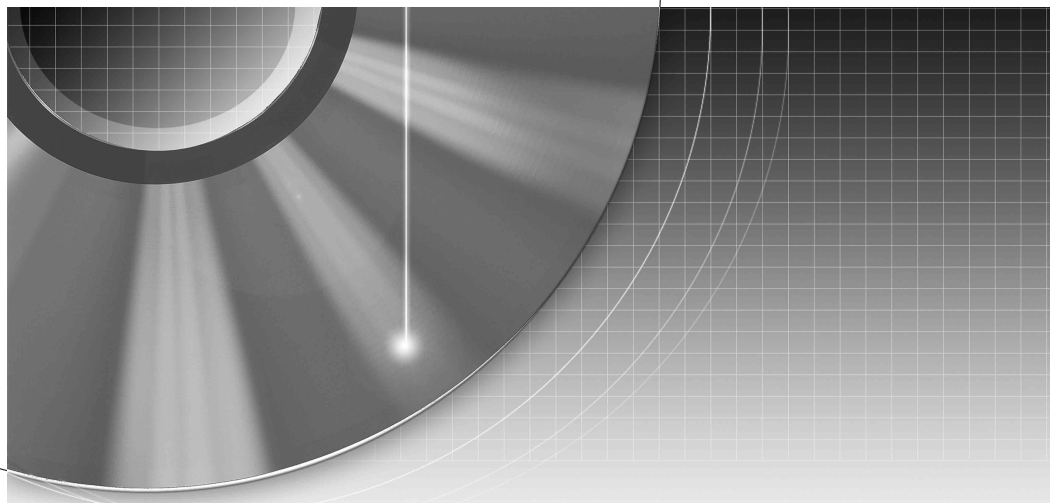


SONY®

2-631-916-12(1)



# DVD Recorder Home Theatre System

Operating Instructions

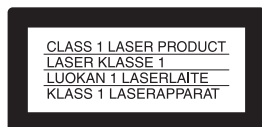
DAR-RD100



© 2005 Sony Corporation

# WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture. To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only. The mains lead must only be changed at a qualified service shop.



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

## CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this DVD recorder is harmful to eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.



This label is located on the laser protective housing inside the enclosure.

## Notice for customers in the United Kingdom and Republic of Ireland

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience. Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362, (i.e., marked with ⚡ or ⚡ mark) must be used. If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

## Precautions

- This unit operates on 220 – 240 V AC, 50/60 Hz. Check that the unit's operating voltage is identical with your local power supply.
- To prevent fire, do not cover the ventilation of the apparatus with newspapers, table-cloths, curtains, etc. And do not place lighted candles on the apparatus.
- To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VIDEO Plus+ system is manufactured under license from Gemstar Development Corporation.



Do not throw away the battery with general house waste, dispose of it correctly as chemical waste.

## Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the

applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

# Precautions

## On safety

Should any solid object or liquid fall into the cabinet, unplug the system and have it checked by qualified personnel before operating it any further. When disconnecting the mains leads, do not touch the metallic part of the jacks or plugs. Do not put any object into the holes on the set (fan ventilation holes, jacks, etc.). Electric shock may result.

## On power sources

- The system is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the system itself has been turned off.
- If you are not going to use the system for a long time, be sure to disconnect the system from the wall outlet. To disconnect the AC power cord (mains lead), grasp the plug itself; never pull the cord.
- Do not disconnect the AC power cord (mains lead) while the system is in use.

## On placement

- Place the system in a location with adequate ventilation to prevent heat build-up in the system.
- At high volume, over long periods of time, the cabinet becomes hot to the touch. This is not a malfunction. However, touching the cabinet should be avoided. Do not place the system in a confined space where ventilation is poor as this may cause overheating.
- Do not block the ventilation holes for the cooling fan by putting anything on the system. The system is equipped with a high power amplifier. If the ventilation holes are blocked, the system can overheat and malfunction.
- Do not place the system on a soft surface such as a rug that might block the ventilation holes.
- Do not install the system in a confined space, such as a bookcase or built-in cabinet.

- Do not place the system in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- Do not place the system in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the system and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy objects on the system.
- Do not put objects in front of the speakers as they may fall over when loud sound is output.
- If the system is brought directly from a cold to a warm location, moisture may condense inside the DVD Recorder Home Theatre System and cause damage to the lenses. When you first install the system, or when you move it from a cold to a warm location, wait for about 30 minutes before operating the system.

## On recording

- Note that the contents of the recording cannot be compensated for under any and all conditions, including conditions that may arise due to a malfunction of this unit.
- Make trial recordings before making the actual recording.

## Copyrights

- Television programmes, films, video tapes, discs, and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmitter and/or programme owner.
- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless

otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

- This system incorporates with Dolby<sup>\*1</sup> Digital and Dolby Pro Logic (II) adaptive matrix surround decoder and the DTS<sup>\*2</sup> Digital Surround System.

<sup>\*1</sup> Manufactured under license from Dolby Laboratories.

“Dolby,” “Pro Logic,” and the double-D symbol are trademarks of Dolby Laboratories.

<sup>\*2</sup> Manufactured under license from Digital Theater Systems, Inc. “DTS” and “DTS Digital Surround” are trademarks of Digital Theater Systems, Inc.

## Copy guard function

Since the recorder has a copy guard function, programmes received through an external tuner (not supplied) may contain copy protection signals (copy guard function) and as such may not be recordable, depending on the type of recordal.

### IMPORTANT NOTICE

Caution: This system is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Plasma display panels and projection televisions are especially susceptible to this.

If you have any questions or problems concerning your recorder, please consult your nearest Sony dealer.

## About this manual

- Instructions in this manual describe the controls on the remote. You can also use the controls on the recorder or other unit(s) if they have the same or similar names as those on the remote.
- Enclosed in brackets are the option names and messages that appear on the screen. Those displayed in

the front panel displays are enclosed in quotation marks.

- The on-screen display illustrations used in this manual may not match the graphics displayed on your TV screen.
- The explanations regarding discs in this manual refer to discs created on this recorder. The explanations do not apply to discs that are created on other recorders and played back on this recorder.

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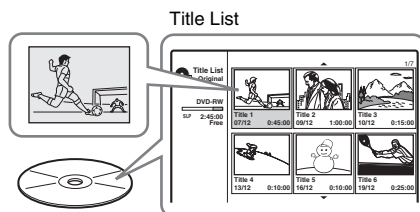
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# Ways to Use Your DVD Recorder/Home Theatre System

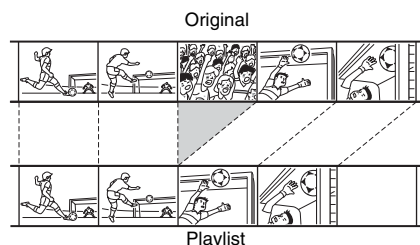
## Quick access to recorded titles – Title List

- ➔ Display the Title List to see all of the titles on the disc, including recording date, title length, and thumbnail image (page 33).



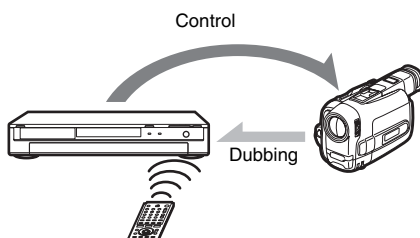
## Creating your own programme – Playlist

- ➔ Record a programme on a DVD-RW (VR mode), then delete, move and add scenes at will to create your own, original programme (page 63).



## Dubbing of DV/Digital8 tapes – DV Dubbing

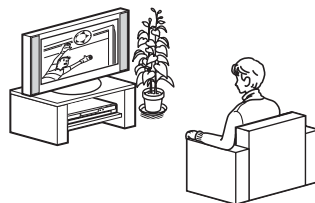
- ➔ Connect your digital video camera to the DV IN jack and dub the entire contents or just selected scenes to a DVD disc (page 70).



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## Progressive PAL playback

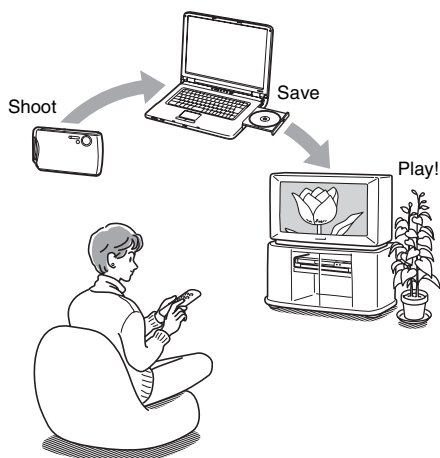
- ➔ If your TV is compatible with progressive signals, you can enjoy accurate colour reproduction and high quality images in Progressive mode.



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## Playing JPEG image files

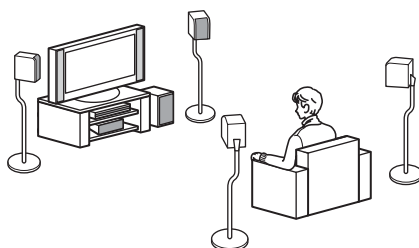
- ➔ You can enjoy viewing JPEG images on your TV screen. First, take pictures with a digital camera and save them in JPEG format to a CD-R/CD-RW on a PC. Then play the CD-R/CD-RW on this recorder (page 61).



---

## Listening multi channel sound with the speakers










- ➔ You can enjoy any commercially available DVD VIDEO with the dynamic sound from the 5.1ch speakers. The system has Sound Field settings that simulate various acoustic characteristics, allowing you to listen to TV sound with the surround speakers, or full 5.1ch speakers (page 85).



A list of recordable and playable discs is on page 8.

# Quick Guide to Disc Types

## Recordable and playable discs

Type		Disc Logo	Icon used in this manual	Formatting (new discs)	Compatibility with other DVD players (finalizing)	
DVD+RW				Automatically formatted	Playable on DVD+RW compatible players (automatically finalized)	
DVD-RW	VR mode			Automatically formatted in VR mode	Playable only on VR mode compatible players (finalization unnecessary)	
	Video mode			Manually reformat in Video mode (page 31)	Playable on most DVD players (finalization necessary) (page 39)	
DVD+R				Automatically formatted	Playable on most DVD+R compatible players (finalization necessary) (page 39)	
DVD-R				Automatically formatted	Playable on most DVD players (finalization necessary) (page 39)	

### Usable disc versions (as of February 2005)

- 4x-speed or slower DVD+RWs
- 4x-speed or slower DVD-RWs (Ver.1.1, Ver.1.2 with CPRM\*<sup>1</sup>)
- 8x-speed or slower DVD+Rs
- 8x-speed or slower DVD-Rs (Ver.2.0)

“DVD+RW,” “DVD-RW,” “DVD+R,” and “DVD-R,” are trademarks.

\*<sup>1</sup> CPRM (Content Protection for Recordable Media) is a coding technology that protects copyrights for images.

\*<sup>2</sup> To free up disc space, erase the last title on the disc.

\*<sup>3</sup> Erasing titles does not free up disc space.











	Recording Features			Editing Features				
	Rewrite (page 41)	Record 16:9 sizes (page 82)	Auto chapter (page 82)	Erase title (page 65)	A-B Erase (page 65)	Manual chapter (page 68)	Erase chapter/ Hide chapter (page 67)	Playlist (page 63)
	Yes	No	Yes	Yes * <sup>2</sup>	No	Yes	No/Yes	No
	Yes	Yes	Yes	Yes	Yes	Yes	Yes/No	Yes
	Yes	No	Yes	Yes * <sup>2</sup>	No	No	No/No	No
	No	No	Yes	Yes * <sup>3</sup>	No	Yes	No/Yes	No
	No	No	Yes	Yes * <sup>3</sup>	No	No	No/No	No

### Discs that cannot be recorded on

- DVD-RWs (Ver.1.0)
- DVD+RWs that are not 2.4x-speed compatible
- Double layer discs
- 8 cm discs

## Playable discs

Type	Disc Logo	Icon used in this manual	Characteristics
DVD VIDEO			Discs such as movies that can be purchased or rented
VIDEO CD			VIDEO CDs or CD-Rs/CD-RWs in VIDEO CD/Super VIDEO CD format
CD			Music CDs or CD-Rs/CD-RWs in music CD format that can be purchased
DATA CD			CD-ROMs/CD-Rs/CD-RWs containing MP3 audio tracks and JPEG image files

### Notes about CDs

- The recorder can play CD-ROMs/CD-Rs/CD-RWs recorded in the following formats:
  - music CD format
  - video CD format
  - MP3 audio tracks and JPEG image files of format conforming to ISO9660\* Level 1/Level 2, or its extended format, Joliet
- \* A logical format of files and folders on CD-ROMs, defined by ISO (International Organization for Standardization).
- When playing DTS surround sound on a CD, you can hear the sound from this speaker system only. The audio signals are not output from the LINE output jacks on the recorder.

### Discs that cannot be played

- All CD-ROMs (including PHOTO CDs)
- CD-Rs/CD-RWs, other than those recorded in the format, listed above
- Data part of CD-Extras
- DVD-ROMs
- DVD Audio discs
- DVD-RAMs
- DVD+R DL (double layer) discs
- HD layer on Super Audio CDs
- DVD VIDEOS with a different region code (page 11)


### Hint

This recorder can play 8 cm CDs and finalized 8 cm DVDs.

## Note on playback operations of DVD VIDEOS/VIDEO CDs

Some playback operations of DVD VIDEOS/VIDEO CDs may be intentionally set by software producers. Since this recorder plays DVD VIDEOS/VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, see the instructions supplied with the DVD VIDEOS/VIDEO CDs.

### Region code (DVD VIDEO only)

Your recorder has a region code printed on the rear of the unit and will only play DVD VIDEOS (playback only) labelled with identical region codes. This system is used to protect copyrights. DVD VIDEOS labelled  will also play on this recorder.

If you try to play any other DVD VIDEO, the message [Playback prohibited by region code] will appear on the TV screen. Depending on the DVD VIDEO, no region code indication may be labelled even though playing the DVD VIDEO is prohibited by area restrictions.



Region code

## Music discs encoded with copyright protection technologies

This product is designed to play back discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are being marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

### Note on DualDiscs

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

## Notes

- Some DVD+RWs/DVD+Rs, DVD-RWs/DVD-Rs, or CD-RWs/CD-Rs cannot be played on this recorder due to the recording quality or physical condition of the disc, or the characteristics of the recording device and authoring software. The disc will not play if it has not been correctly finalized. For more information, see the operating instructions for the recording device.
- You cannot mix VR mode and Video mode on the same DVD-RW. To change the disc's format, reformat the disc (page 31). Note that the disc's contents will be erased after reformatting.
- You cannot shorten the time required for recording even with high-speed discs.
- It is recommended that you use discs with "For Video" printed on their packaging.
- You cannot add new recordings to DVD-RWs (Video mode) or DVD-Rs that contain recordings made on other DVD equipment.
- In some cases, you may not be able to add new recordings to DVD+RWs that contain recordings made on other DVD equipment. If you do add a new recording, note that this recorder will rewrite the DVD menu.
- If the disc contains PC data unrecognizable by this recorder, the data may be erased.

# Overview

Complete the following steps to start using this DVD recorder/home theatre system.

Step 1: Unpacking (page 12)



Step 2: Connecting the Speaker System (page 14)



Step 3: Connecting the FM/AM Aerials (page 17)



Step 4: Connecting the Speaker System and Recorder (page 18)



Step 5: Connecting the TV Aerial (page 19)



Step 6: Connecting the TV and Recorder (page 20)



Step 7: Connecting the Mains Leads (page 23)



Step 8: Initial Setup (page 28)

Steps 1 to 4 are for the speaker system; steps 5 and 6 for the recorder. After finishing all of the hookups, connect the mains leads in step 7, and start setting up the system in “Step 8: Initial Setup.”

## Notes

- Plug cords securely to prevent unwanted noise.
- See the instructions supplied with the components to be connected.
- You cannot connect this recorder to a TV that does not have a SCART or video input jack.
- Be sure to disconnect the mains lead of each component before connecting.

# Step 1: Unpacking

Check that you have the following items.

In DVD carton box:

- DVD recorder (1)
- TV aerial cable (1)



In main carton box:

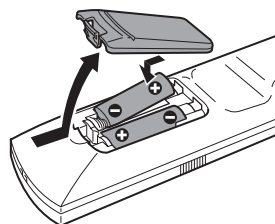
- Active subwoofer (1)
- Centre unit (1)
- Speakers (4)
- AM loop aerial (1)
- FM wire aerial (1)
- Speaker cords (short × 2, long × 2)
- Optical digital cord (1)
- Remote commander (remote) (1)
- R6 (size AA) batteries (2)
- Foot pads\*
- Operating Instructions (1)
- Hookup Guide (card) (1)

\* Attach the pads to the bottom of the speakers.

## Inserting batteries into the remote


You can control the recorder and the speaker system using the supplied remote. Insert two R6 (size AA) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the compartment.

Point the remote at  (remote sensor) on the recorder. Or, point it at  on the centre unit when operating the speaker system.



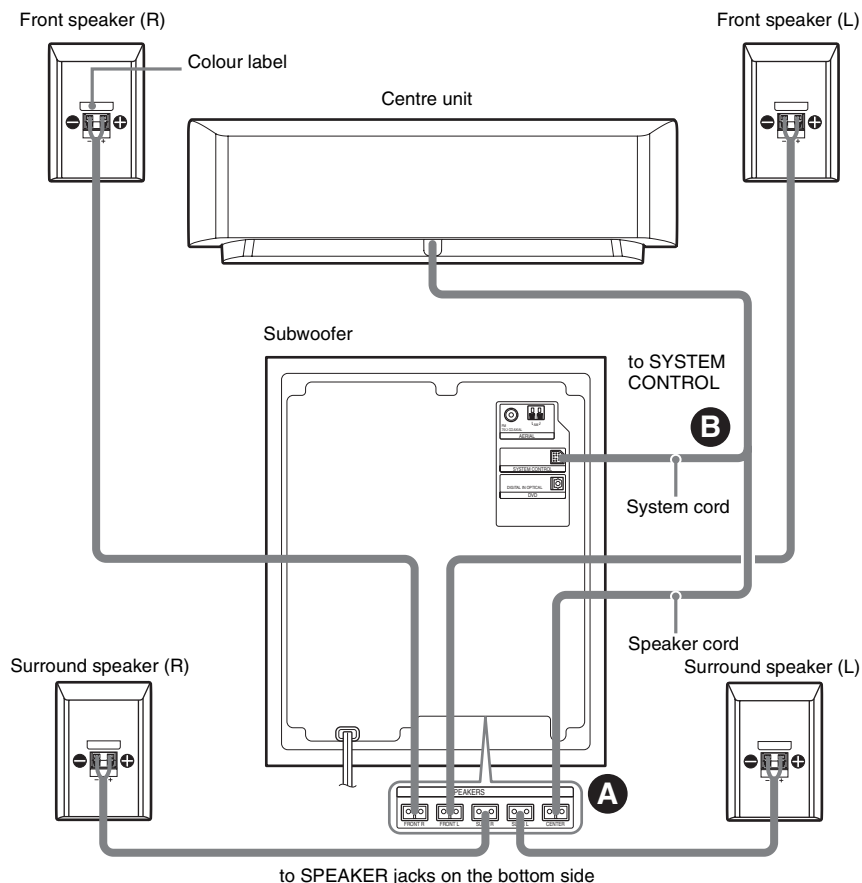
## Notes

- If the supplied remote interferes your other Sony DVD recorder or player, change the command mode number for this recorder (page 99).
- If you are using a non Sony TV, set the code number for the TV's manufacturer (page 98).
- Use the batteries correctly to avoid possible leakage and corrosion. Do not touch the liquid with bare hands should leakage occur. Observe the following:

- Do not use a new battery with an old battery, or batteries of different manufacturers.
- Do not attempt to recharge the batteries.
- If you do not intend to use the remote for an extended period of time, remove the batteries.
- If battery leakage occurs, wipe out any liquid inside the battery compartment, and insert new batteries.
- Do not expose the remote sensors (marked  on the recorder and the centre unit) to strong light, such as direct sunlight or lighting apparatus. The system may not respond to the remote.

## Step 2: Connecting the Speaker System

Connect the system components using the supplied cords as marked **A** and **B** below.



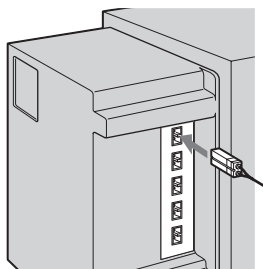
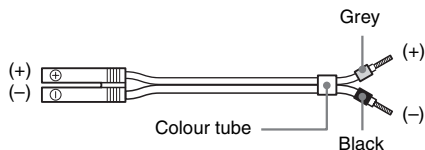
### Notes

- Do not set the speakers in an inclined position.
- Do not place the speakers in locations that are:
  - Extremely hot or cold
  - Dusty or dirty
  - Very humid
  - Subject to vibrations
  - Subject to direct sunlight
- Do not connect any speakers other than those supplied with this system.
- Use caution when placing the speakers and/or speaker stands (not supplied) that are attached with the speakers on a specially treated (waxed, oiled, polished, etc.) floor, as staining or discoloration may result.

## A Wiring the speakers

Connect the supplied speakers to the SPEAKER jacks on the bottom side of the subwoofer using the speaker cords.

Use the speaker cord whose tube is the same colour as the jack label on the connecting speaker.

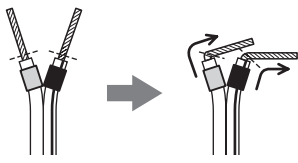


### Notes

- Cover the floor with a cloth when connecting.
- Be sure to match the polarity of the speaker cord and the terminal on the component; ⊕ to ⊕ (grey), ⊖ to ⊖ (black). If reversed, the sound will lack bass and may be distorted.

### Notes on speaker cord treatment

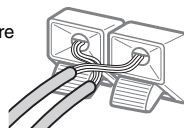
- Do not insert the speaker cord insulation in the speaker terminals. Bend the stripped cord at the end of the insulation before connecting.



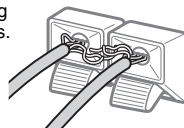
- To prevent short-circuiting of the speakers, make sure the stripped speaker cord does not touch the other stripped speaker cord or the terminal.

Example:

Too much insulation is removed. Stripped cords are touching each other.



Stripped cords are touching the other speaker terminals.

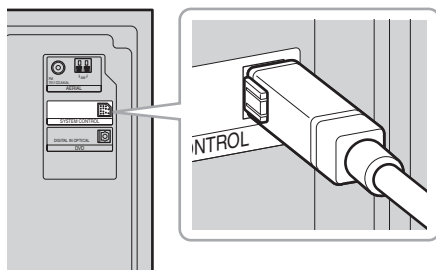


After connecting the system components and the mains leads, you can check for a speaker short-circuit using the test tone (page 94). If the test tone is not output, or is output from a speaker other than indicated in the centre unit display, check the speaker connection.

## B Connecting the subwoofer and the centre unit

Connect the system cord of the centre unit to the SYSTEM CONTROL jack of the subwoofer, then, connect the speaker cord to the CENTER SPEAKER jack. Insert the plugs fully until they click.

to SYSTEM CONTROL



### Note

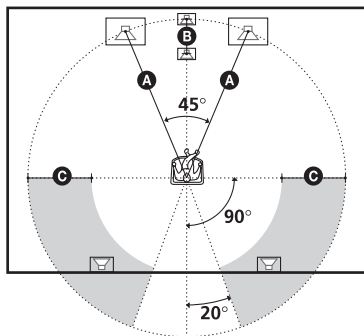
If the system cord is disconnected while the power is on, the speaker system enters standby mode (page 101).

## Positioning the speakers

For the best possible surround sound, all the speakers other than the subwoofer should be the same distance from the listening position (A).

However, this system allows you to place the centre unit up to 1.6 m closer (B) and the surround speakers up to 4.6 m closer (C) to the listening position.

The front speakers can be placed from 1.0 to 7.0 m (A) from the listening position.



### Note

Do not place the centre unit and surround speakers farther away from the listening position than the front speakers.

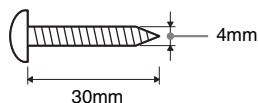
### Note on subwoofer placement

If the subwoofer is placed too close to a CRT TV or projector, magnetic leakage may interfere with the video signals and cause colour irregularity. Should this happen, turn off the TV or the projector, wait for 15 to 30 minutes, and then turn it on again. If the problem persists, try the following:

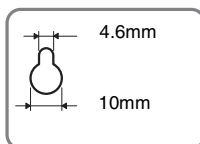
- Place the subwoofer at least 0.3 m away from the TV or the projector.
- Remove any magnetic object near the subwoofer (healthcare devices, toys, etc.). Magnetic latches on TV stands may also cause the problem.

## To install the speakers on a wall

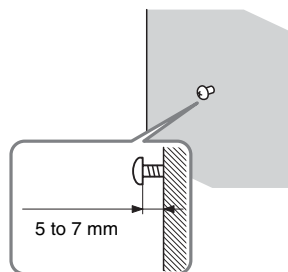
- 1 Prepare screws (not supplied) that are suitable for the hole on the back of each speaker.



Hole on the back of the speaker

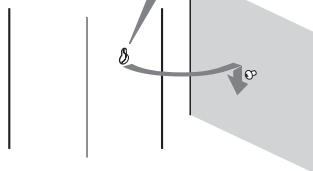
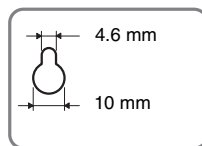


- 2 Fasten the screws to the wall. The screws should protrude 5 to 7 mm.



- 3 Hang the speakers on the screws.

Hole on the back of the speaker

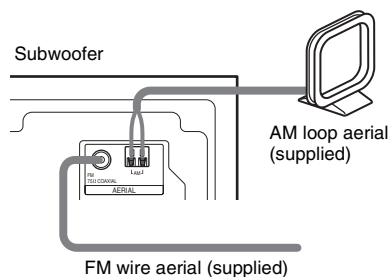




## Notes

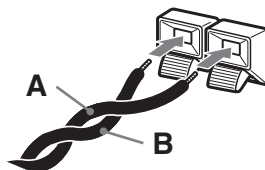
- Use screws that are suitable for the wall material and strength. As a plaster board wall is especially fragile, attach the screws securely to a beam and fasten them to the wall. Install the speakers on a vertical, flat wall where reinforcement is applied.
- Contact a screw shop or installer regarding the wall material or screws to be used.
- Sony is not responsible for accident or damage caused by improper installation, insufficient wall strength or improper screw installation, natural calamity, etc.

## Step 3: Connecting the FM/AM Aerials

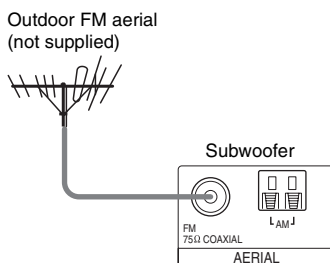


## Hints

- When connecting the AM loop aerial, cord (A) or cord (B) can be connected to either terminal.



- If you have poor FM reception, use a 75-ohm coaxial cable (not supplied) to connect the system to an outdoor FM aerial as shown below.

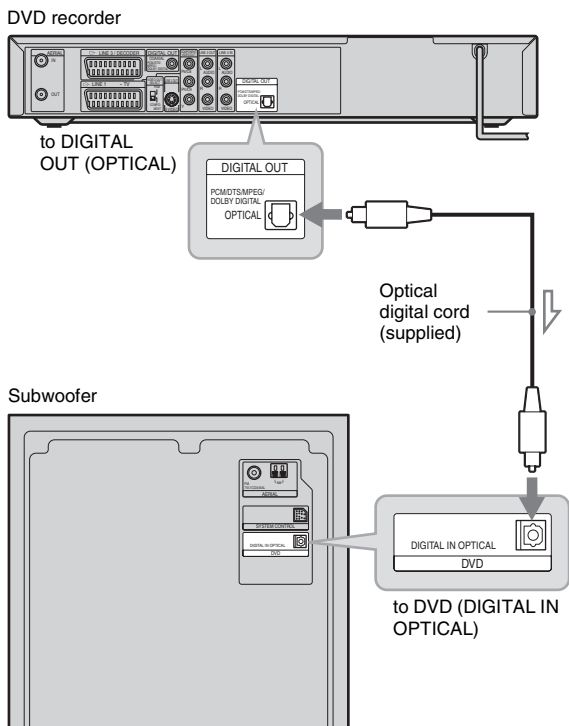


## Notes

- To prevent noise pickup, keep the AM loop aerial away from the system and other equipment.
- Be sure to fully extend the FM wire aerial.
- After connecting the FM wire aerial, keep it as horizontal as possible.

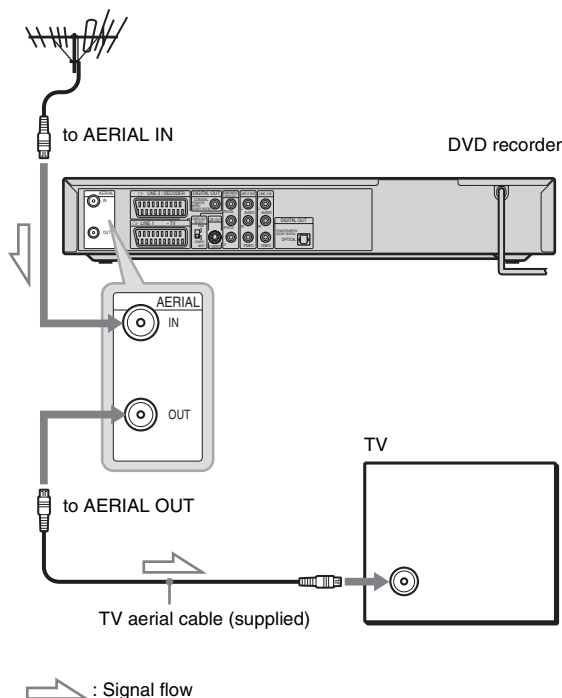
## Step 4: Connecting the Speaker System and Recorder

Connect the DVD (DIGITAL IN OPTICAL) jack of the subwoofer to the DIGITAL OUT (OPTICAL) jack of the recorder using the supplied optical digital cord.



## Step 5: Connecting the TV Aerial

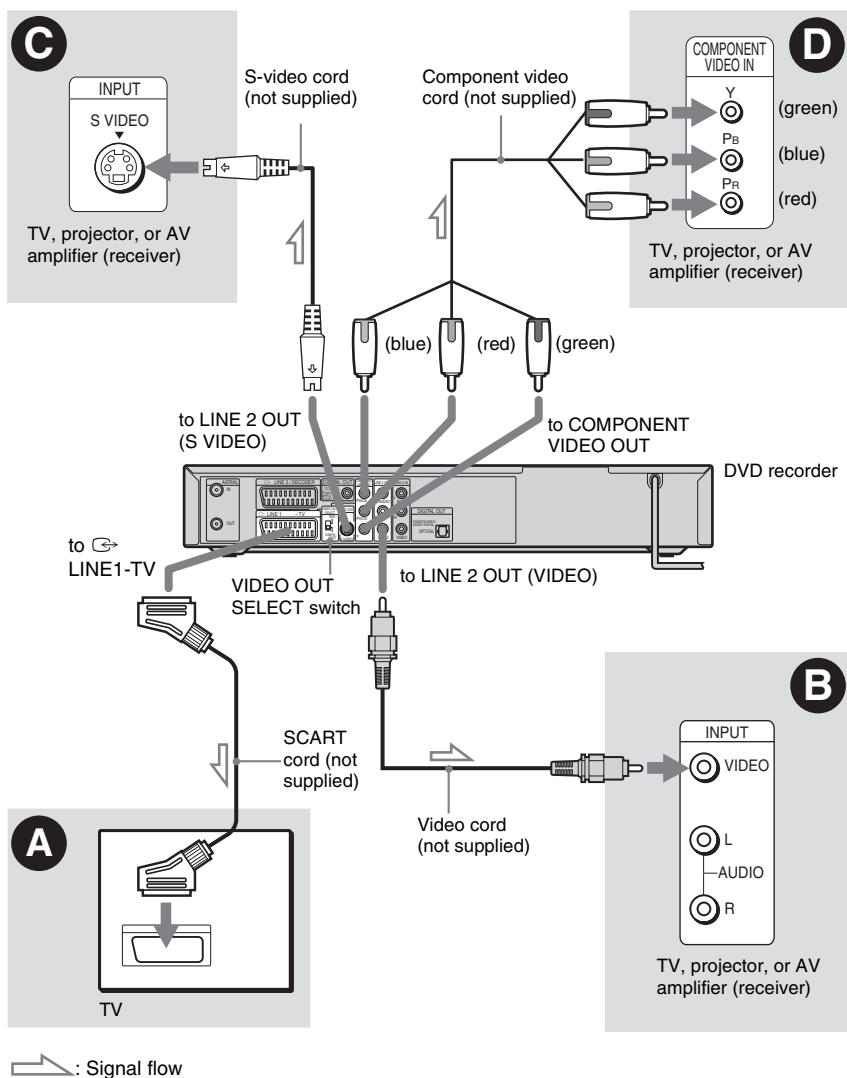
Connect the TV aerial cable following the steps below. Do not connect the mains lead until you reach “Step 7: Connecting the Mains Leads” (page 23).



- 1** Disconnect the TV aerial cable from your TV and connect it to AERIAL IN on the rear panel of the recorder.
- 2** Connect AERIAL OUT of the recorder to the aerial input of your TV, using the supplied TV aerial cable.

## Step 6: Connecting the TV and Recorder

Connect the video cord to view pictures. Select one of following patterns **A** through **D** according to the input jack on your TV monitor or projector.



### Note

Do not connect more than one type of video cord between the recorder and your TV at the same time.

## A Connecting to a SCART input jack

Connect using a SCART cord (not supplied) to the LINE 1-TV jack and your TV. Be sure of a firm connection to avoid hum and noise.

See the operating instructions supplied with the TV to be connected. Set the VIDEO OUT SELECT switch on the rear panel to "RGB."



## B Connecting to a video input jack

Connect using a video cord (not supplied) to the yellow LINE 2 OUT (VIDEO) jack. You will enjoy standard quality images.



## C Connecting to an S VIDEO input jack

Connect using an S-video cord (not supplied) to the LINE 2 OUT (S VIDEO) jack. You will enjoy high quality images.



## D Connecting to component video input jacks (P<sub>B</sub>/C<sub>B</sub>, P<sub>R</sub>/C<sub>R</sub>, Y)

Connect the COMPONENT VIDEO OUT jacks using a component video cord (not supplied) or three video cords (not supplied) of the same kind and length. You will enjoy accurate colour reproduction and high quality images.

Set the VIDEO OUT SELECT switch on the rear panel to "COMPONENT."

If your TV accepts progressive 625p format signals, you must use this connection and set [Progressive Mode] in [Settings] Setup to [On] (see page 78). The PROGRESSIVE indicator lights up on the recorder.



## When playing "wide screen" images

Some recorded images may not fit your TV screen. To change the aspect ratio, see page 77.

## If you are connecting to a VCR

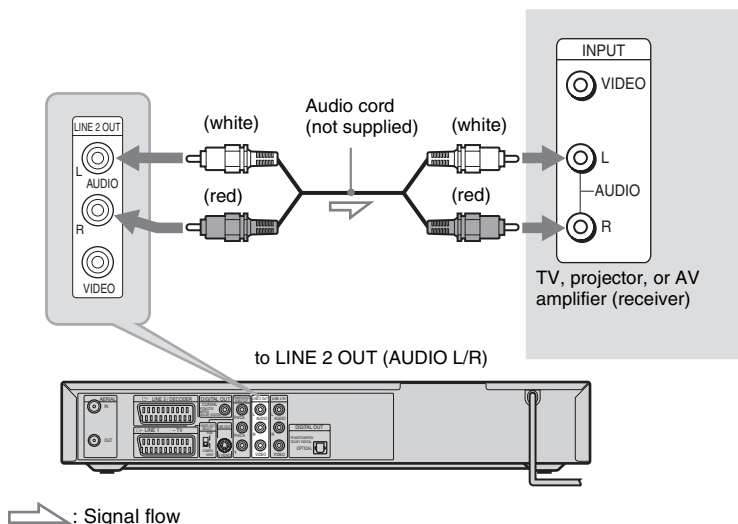
Connect your VCR to the LINE 3/DECODER jack on the recorder (page 24).

### Notes

- Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In the case of 625 progressive scan picture problems, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding our TV set compatibility with this model 625p DVD recorder, please contact our customer service centre.
- When you connect the recorder to your TV via the SCART jacks, the TV's input source is set to the recorder automatically when you turn the recorder on. If necessary, press TV/DVD on the remote to return the input to TV.

## Connecting the audio cords

If you use your TV's speakers for listening to sound, connect the LINE 2 OUT jacks of the recorder to the audio input jacks of your TV.



### Hint

You can connect an AV amplifier to the DIGITAL OUT (COAXIAL) jack. Make the appropriate settings under [Audio] setup (page 79). All the surround effects of the system cannot be used.

### Notes

- Do not connect your TV's audio output jacks to the LINE IN (AUDIO L/R) jacks at the same time. This will cause unwanted noise to come from your TV's speakers.
- Do not connect the LINE 4 IN (AUDIO L/R) and LINE 2 OUT (AUDIO L/R) jacks to your TV's audio output jacks at the same time. This will cause unwanted noise to come from your TV's speakers.

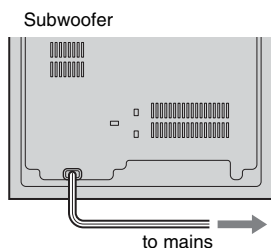
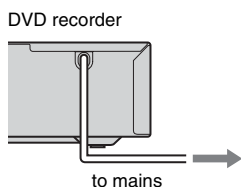
### To use the recorder's surround function


With the audio connection above, you can enjoy virtual surround sound effects created from the left and right speakers.

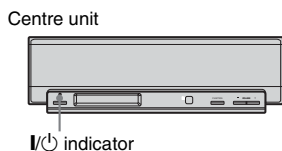
Press SUR on the remote to turn on the function.  
[SUR ON] appears on the TV screen  
To turn off the function, press SUR again.

## Step 7: Connecting the Mains Leads

Plug the recorder, subwoofer, and TV mains leads (power cords) into the mains.



Check that the  indicator on the centre unit lights up when the subwoofer mains lead is connected.



After you connect the recorder mains lead, **you must wait a short while before operating the recorder.** You can operate the recorder once the front panel display lights up and the recorder enters standby mode.

If you connect additional equipment to this recorder, go to “Connecting the Recorder to Other Equipment” (page 24) before connecting the mains leads.

After all connections are complete, follow the steps of “Step 8: Initial Setup” (page 28).


### To turn the recorder on and off

Press DVD .

When you turn off the recorder, the recorder enters standby mode.

### To turn the speaker system on and off

Press AMP .

When you turn off the speaker system, the speaker system enters standby mode and the  indicator on the centre unit display lights up in red.

# Connecting the Recorder to Other Equipment

Connect other equipment (VCR, satellite tuner, PAY-TV decoder, etc.) to the LINE IN jacks of the recorder.

Disconnect the recorder's mains lead from the mains when connecting them.

Use the DV IN jack on the front panel if the equipment has a DV output jack (i.LINK jack) (page 71).

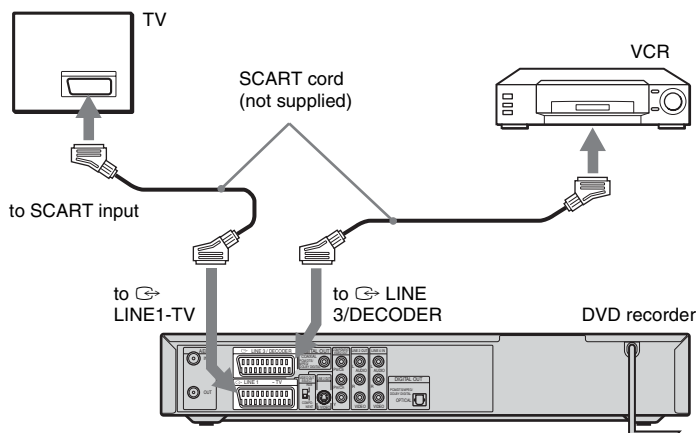
See also the operating instructions supplied with the connected equipment.

To record on this recorder, see "Recording From Connected Equipment" (page 49). To listen to the sound of other equipment through the speaker system, see "Enjoying TV or VCR Sound From the Speaker System" (page 90).

## Connecting a VCR or similar device

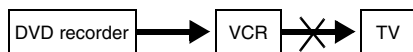
### To connect to the LINE 3 jack

Connect a VCR or similar recording device to the LINE 3/DECODER jack of this recorder.

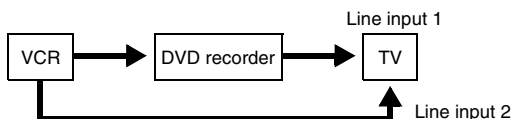


### Notes

- Pictures containing copy protection signals, which prohibit copying, cannot be recorded.
- If you pass the recorder signals via the VCR, you may not receive a clear image on your TV screen.



Be sure to connect your VCR to the DVD recorder and your TV in the order shown below. To watch video tapes, watch the tapes through a second line input on your TV ("Line input 2" below).

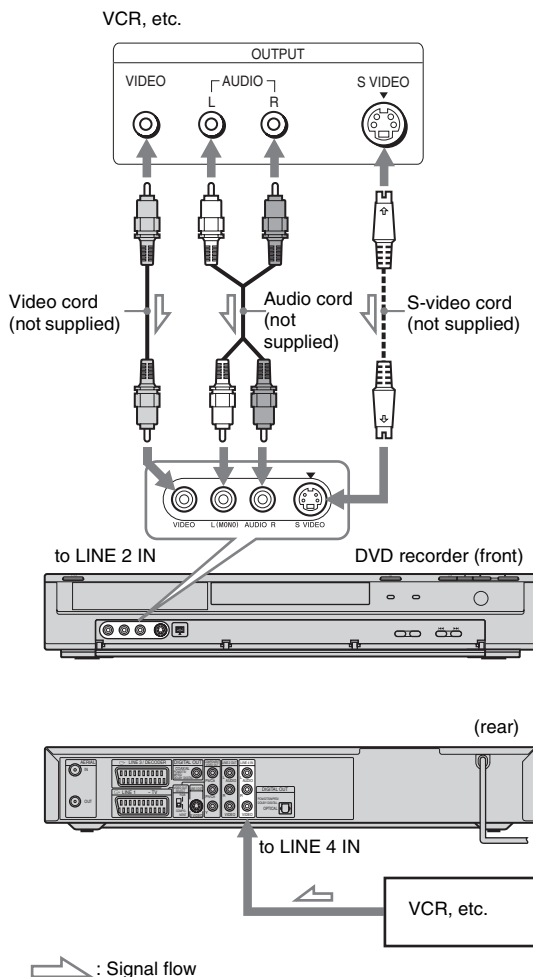


- When you record to a VCR from this DVD recorder, do not switch the input source to TV by pressing the TV/DVD button on the remote.
- If you disconnect the recorder's mains lead, you will not be able to view the signals from the connected VCR.



## To connect to the LINE 2 IN or LINE 4 IN jacks

Connect a VCR or similar recording device to the LINE 2 IN or LINE 4 IN jacks of this recorder. If you are connecting to the LINE 2 IN jacks and the equipment has an S-video jack, you can use an S-video cord instead of a video cord.



### Hint

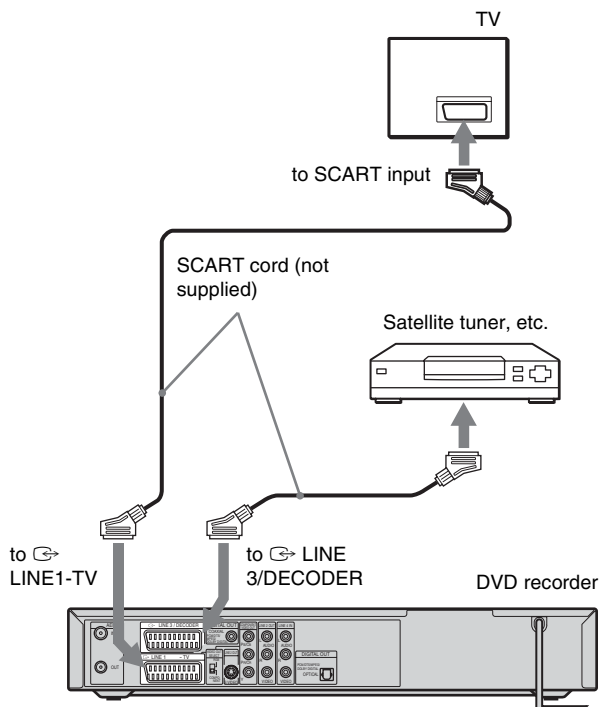
When the connected equipment outputs only monaural sound, use audio cords that distribute monaural sounds to left/right channels (not supplied).

### Notes

- Do not connect the yellow LINE IN (VIDEO) jack when using an S-video cord.
- Do not connect the output jack of this recorder to another equipment's input jack with the other equipment's output jack connected to the input jack of this recorder. Noise (feedback) may result.
- Do not connect more than one type of video cord between the recorder and your TV at the same time.

## Connecting to a satellite or digital tuner

Connect a satellite or digital tuner to this recorder using the LINE 3/DECODER jack. Disconnect the recorder's mains lead from the mains when connecting the tuner.



### Hint

You do not need to turn on the recorder to view the signals from the connected tuner on your TV.

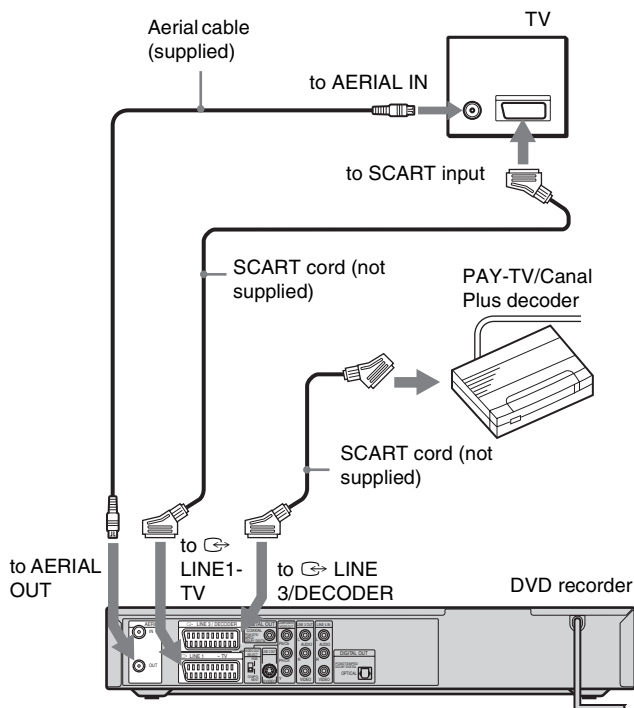
### Notes

- If you are using a B Sky B tuner, be sure to connect the tuner's VCR SCART jack to the LINE 3/DECODER jack.
- If you disconnect the recorder's mains lead, you will not be able to view the signals from the connected tuner.
- When the recorder is turned off, the LINE 3/DECODER jack does not accept 16:9 screen size signals.

## Connecting a PAY-TV/Canal Plus decoder

You can watch or record PAY-TV/Canal Plus programmes if you connect a decoder (not supplied) to the recorder. Disconnect the recorder's mains lead from the mains when connecting the decoder.

To watch or record PAY-TV/Canal Plus programmes, set your recorder to receive the channels using the Setup Display. See "[Channel Settings]" in [Settings] Setup (page 75).



### Hint

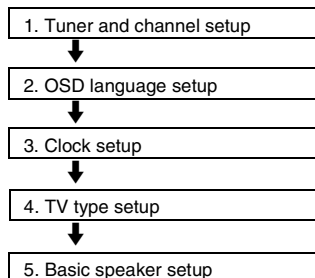
You do not need to turn on the recorder to view the signals from the connected tuner on your TV.

### Notes

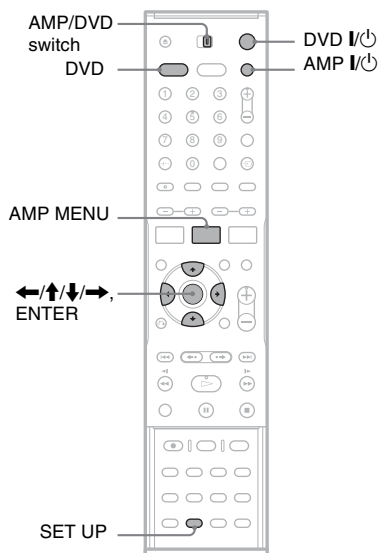
- To watch or record PAY-TV/Canal Plus programmes from the LINE 1-TV jack, set [Line1 Decoder] in [Settings] Setup to [On] (page 78).
- If you disconnect the recorder's mains lead, you will not be able to view the signals from the connected decoder.

## Step 8: Initial Setup

Use the Setup Displays and AMP menu to make the initial settings for using the system. Complete the initial setup in the following order.



Follow the steps from “1. Tuner and channel setup” to “5. Basic speaker setup” below.

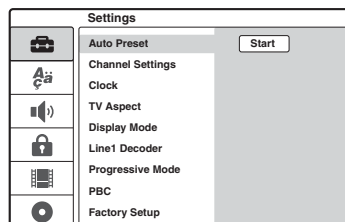


### 1. Tuner and channel setup

- 1** Turn on the TV.
- 2** Press DVD I/⏻ to turn on the recorder.
- 3** Switch the input selector on your TV so that the signal from the recorder appears on your TV screen.

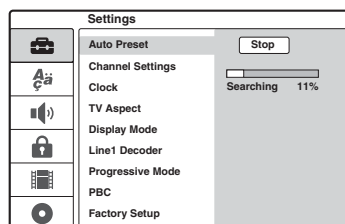
- 4** While the recorder is in stop mode, set the AMP/DVD switch to DVD, and press SET UP.

The Setup Display appears, which allows you to make adjustments to the recorder. For details about the Setup Display, see page 74.



- 5** Press ENTER while [Start] is selected.

The recorder automatically starts searching for all the receivable channels and presets them.



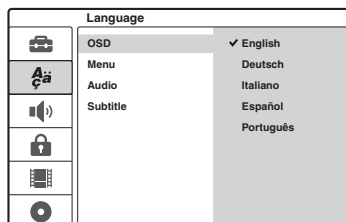
To manually set, disable, or fine-tune the channels, see “[Channel Settings]” in [Settings] Setup (page 75).

- 6** Press ← to return to the Setup Display, and follow the steps of “2. OSD language setup” (see below).

If you do not want to change the on-screen display language, go to “3. Clock setup” (page 29).

## 2. OSD language setup

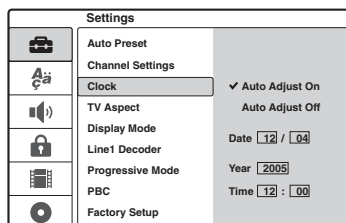
- 1 Press **↑/↓** to select **Aa** [Language] (language), and press **→**.  
[Language] Setup appears.
- 2 Press **↑/↓** to select [OSD] (on-screen display), and press **→**.



- 3 Press **↑/↓** to select a language, and press **ENTER**.  
The on-screen language changes to the selected language.
- 4 Press **←** to return to the Setup Display, and follow the steps of “3. Clock setup” (see below).

## 3. Clock setup

- 1 Press **↑/↓** to select **⚙️** [Settings], and press **→**.  
[Settings] Setup appears.
- 2 Press **↑/↓** to select [Clock], and check that the clock is correctly set.

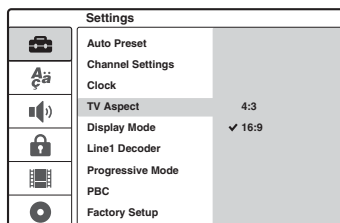


If incorrect, set the clock manually (page 77). Or, the timer recording does not work properly.

- 3 Follow the steps of “4. TV type setup” (see below).

## 4. TV type setup

- 1 Press **↑/↓** to select [TV Aspect], and press **→**.



- 2 Press **↑/↓** to select the aspect ratio of the connected TV, and press **ENTER**.  
[4:3]: For a standard 4:3 screen TV without a wide screen mode. Select [Display Mode] in [Settings] Setup.  
[16:9]: For a wide-screen TV or standard TV with a wide screen mode.
- 3 Press **SET UP** to turn off the Setup Display, and follow the steps of “5. Basic speaker setup” (page 29).

**If you connect a TV that accepts progressive 625p format signals to the COMPONENT VIDEO OUT jacks**

Set [Progressive Mode] in [Settings] Setup to [On] (page 78).

### ⚡ Hint

You can make other adjustments using the Setup Displays, such as picture, sound, and subtitle languages. (See “DVD Recorder Set-Up Menu” on page 74.)

## 5. Basic speaker setup

You can reflect the current speaker positions on the system. Enter the speaker distance from your listening position using the AMP menu on the centre unit display. For details about the AMP menu, see page 91; about speaker placement, see page 16.

- 1 Press **AMP I/⏻** to turn on the speaker system.

If “FM” or “AM” appears on the centre unit display, press DVD on the remote to display “DVD.”

- 2** Set the AMP/DVD switch to AMP, point the remote at the centre unit, and press AMP MENU.

The AMP menu appears.

- 3** Press **↑/↓** to select “SP SETUP” (speaker setup), and press ENTER or **→**.

Example:

CENTER SP

- 4** Press **↑/↓** to select “SURR SP” (surround speaker), and press ENTER or **→**.

SL SR BEHIND

- 5** Press **↑/↓** to select the setting for the position.

If unsure about the position, see ““SURR SP” (surround speaker)” on page 92.

- 6** Press **←** to return to the previous layer.

- 7** Press **↑/↓** to select “FRONT DIST” (front speaker distance), and press ENTER or **→**.

L R FRONT 3.0 m

- 8** Press **↑/↓** to set the front speaker distance from the listening position.

The display changes in 0.2 m increments, from 1.0 to 7.0 m. Enter the shorter distance if the two speaker distances differ.

Example: When entering 5.8 m for the front left and right speakers.

L R FRONT 5.8 m

- 9** Press **←** to return to the previous layer.

- 10** Repeat steps 7 to 9 to set “CEN DIST” (centre speaker distance) and “SURR DIST” (surround speaker distance).

- 11** Press AMP MENU to turn off the AMP menu.

---

### To better adjust the speaker system

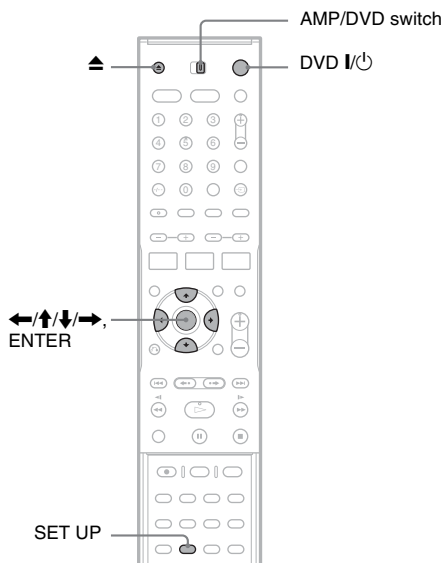
You can change the speaker level etc. See “Speaker Level Settings (“LEVEL”)” (page 93).

**Basic hookups and settings are complete.  
You are ready to start using the system.**

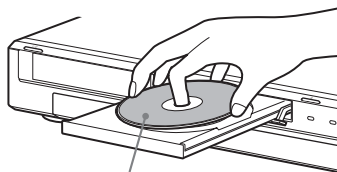
## Inserting and Formatting a Disc

**+RW -RWVR -RWVideo +R -R**

When you first insert a new disc, the recorder will ask you to format the disc. Follow the steps below to format the disc. You can also reformat a DVD+RW or DVD-RW to create a blank disc.



- 1** Turn on the TV.
- 2** Press DVD I/II. The recorder turns on.
- 3** Switch the input selector on your TV so that the signal from the recorder appears on the TV screen.
- 4** Set the AMP/DVD switch to DVD.
- 5** Press **▲** (open/close), and place a disc on the disc tray.



Labelled side facing up

- 6** Press **▲** (open/close) to close the disc tray. After "LOADING" disappears from the front panel display, the display asks for confirmation.
- 7** Press **←** to select [OK] and press ENTER. The recorder starts formatting the disc. The display shows the approximate time required.
- 8** Press ENTER when [OK] appears.
  - For a DVD-RW, the recorder automatically formats in VR mode. To format in Video mode, see "Reformatting a disc" below.

### Hint

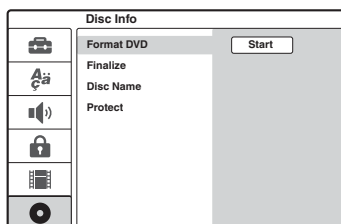
For a formatted disc, you can use the disc after "LOADING" disappears from the front panel display in step 6 above.

## Reformatting a disc

**+RW -RWVR -RWVideo**

You can erase all contents of a disc to create a blank disc. To format a new DVD-RW in Video mode, reformat the disc.

- 1** Insert a disc.
- 2** Set the AMP/DVD switch to DVD, and press SET UP to turn on the Setup Display.
- 3** Select **●** [Disc Info] and press **→**.
- 4** Select [Format DVD] and press **→**.



## 5 While [Start] is selected, press ENTER.

The display asks for confirmation.

- For DVD-RWs, select a recording format (VR mode or Video mode) and press ENTER.

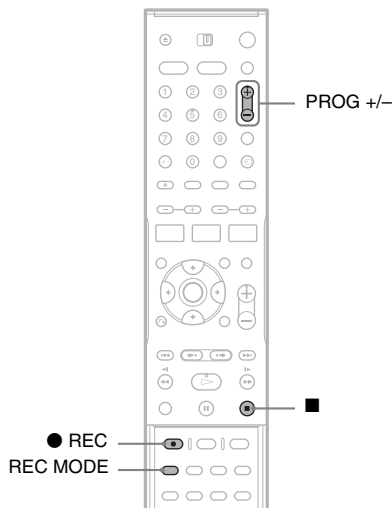
## 6 Select [OK] and press ENTER.

Formatting starts.

# Recording a TV Programme on a Disc

**+RW** **-RWVR** **-RWvideo** **+R** **-R**

This section introduces the basic operation to record the current TV programme on a disc. For details about recording, see page 41.



## 1 Insert a disc.

For details on how to insert and format a new disc, see “Inserting and Formatting a Disc” (page 31).

## 2 Press PROG +/- to select the programme position you want to record.

## 3 Press REC MODE repeatedly to select the recording mode.

Each time you press the button, the display changes on the TV screen as follows:

HQ → SP → EP → SLP  
↑

For details about the recording mode, see page 41.

## 4 Press ● REC.

Recording starts and “●” (red) appears in the front panel display.

Recording continues until you stop the recording or the disc is full.



## To stop recording

Press **■**. Note that it may take a few seconds for recording to stop.

### Hint

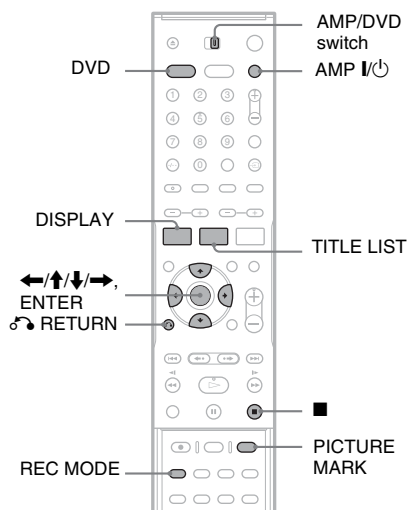
This recorder can record on various discs. Select the disc type according to your needs (page 8).

## Viewing Recorded TV Programmes (Title List)

**+RW** **-RWVR** **-RWVideo** **+R** **-R**

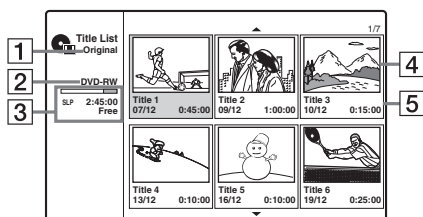
The titles of programmes recorded on a disc are displayed in the Title List, which also displays disc information, such as disc name, remaining time, etc. Follow the steps below to play the recorded programme.

You can also edit individual titles from the Title List (page 64).



- 1** Insert a disc.
- 2** Press **AMP I/⏻** to turn on the speaker system when you use it.  
If “FM” or “AM” appears on the centre unit display, press DVD on the remote to display “DVD.”
- 3** Set the AMP/DVD switch to DVD, and press **TITLE LIST**.  
The Title List menu appears with the contents of the disc.

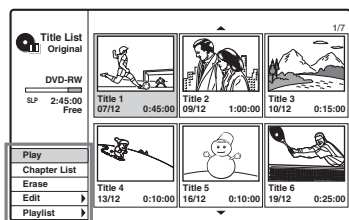
Example: Title List (Original) on a DVD-RW (VR mode)



- 1 Title type (DVD-RW (VR mode) only): Displays the title type, original or Playlist.
- 2 Disc name (page 38): Displays the disc type. If it is a VR mode disc, “VR” appears in the front panel display.
- 3 Disc space bar/remaining time: Press REC MODE repeatedly to show the remaining time in each of the recording modes.
- 4 Title’s thumbnail picture  
Press ◀/▶ to select the previous/next title. If more than six titles are listed, press ↑/↓ to display titles on the previous/next pages row by row.
- 5 Title information:  
Displays the title name, recording date, and recording time.  
Press DISPLAY to show detailed information for the selected title (not available for a Playlist title).

#### 4 Select a title and press ENTER.

The sub-menu appears with options applicable to the selected title. The options displayed differ depending on the situation and disc type.



Options for the selected title

- If you want to turn off the sub-menu and re-select other title, press ⏮ RETURN.

## 5 Select [Play] and press ENTER.

Playback starts from the selected title on the disc.

### About the Title List for DVD-RWs (VR mode)

Each time you press TITLE LIST, you can switch the Title List to show original or Playlist. “PLAYLIST” appears in the front panel display when “Playlist” is selected. For details, see “Edits for Playlist titles” (page 63).

### To change a title thumbnail picture

You can select a favourite scene for the thumbnail picture shown in the Title List menu.

- 1 Play a title whose thumbnail picture you want to change.
- 2 Press PICTURE MARK at the scene you want to set for a thumbnail picture.  
A thumbnail mark appears on the screen and the scene is set for the title’s thumbnail picture.

### To stop playback

Press ■.

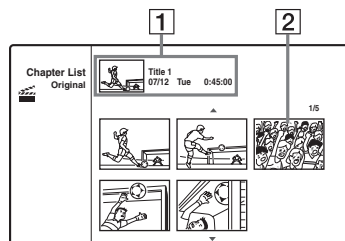
### To turn off the Title List

Press ⏮ RETURN.

## Chapter List

+RW -RWvR +R

When you select [Chapter List] from the sub-menu for a title, the Chapter List menu appears with the title contents displayed as chapters. You can play or edit individual chapters from the sub-menu, which appears when you select a chapter and press ENTER.



- 1 Title information
- 2 Chapter’s thumbnail picture

Press **◀/▶** to select the previous/next chapter. If more than six chapters are listed, press **↑/↓** to display chapters on the previous/next pages row by row.

### To return to the Title List

Select a chapter and press **ENTER**. Select [Title List] from the sub-menu and press **ENTER**.

#### Hint

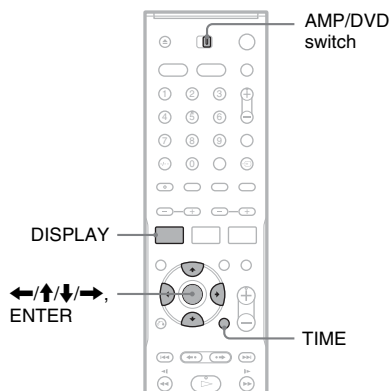
After recording, the first scene of the recording (title) is automatically set as the thumbnail picture.

#### Notes

- The Title List may not appear for discs created on other DVD recorders.
- Letters that cannot be displayed appear as corrupt characters.
- Title thumbnail pictures are displayed only on this recorder.
- It may take a few seconds for the thumbnail pictures to be displayed.
- After editing, the title thumbnail picture may change to the first scene of the recording (title).
- Title thumbnails are set at a point approximate to where the **PICTURE MARK** button is pressed, and the result may be slightly different from the intended one.

## Checking the Playback Information and Playing Time

You can check the playback information and remaining time displayed on the TV screen or the front panel display of the recorder.



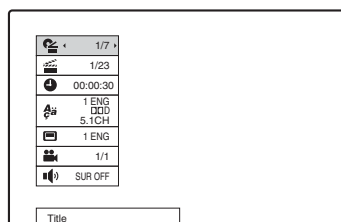
### Checking the playback information in the on-screen display

**+RW** **-RWVR** **-RW<sub>Video</sub>** **+R** **-R** **DVD**  
**VCD**

Set the **AMP/DVD switch** to **DVD**, and press **DISPLAY** to show various playback information on the TV screen.

The items displayed differ depending on the disc type or playing status. To turn off the on-screen display, press **DISPLAY** again.

You can select an item by pressing **↑/↓** and change or select the setting by pressing **◀/▶**. For details about each item, see the pages in parentheses.



- [Title]: Current title (or track) number/total number of titles (or tracks) (56)
- [Chapter]: Current chapter number/total number of chapters (56)
- [Time]: Elapsed playing time (56) (also displays remaining time when TIME is pressed)
- [Audio]: Selected audio language (DVD VIDEO only) or audio channel (53)
- [Subtitle]: Selected subtitle (53)
- [Angle]: Selected angle/total number of angles (53)
- [Sound]: Selected sound mode (53)

**Hint**  
When using the speaker system, you can check the audio surround information on the centre unit display (page 84).

**Note**  
If no button is pressed for ten seconds, the playback information display will turn off.

## Checking the playing time and remaining time

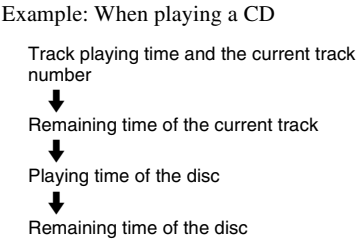
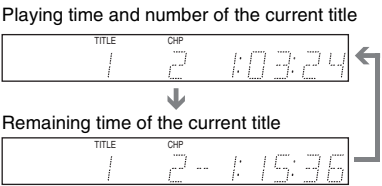


You can view the playing or remaining time information displayed on the TV screen and the front panel display. The same information displayed in the front panel display is shown on the TV screen.

**Press TIME repeatedly.**  
The items displayed differ depending on the disc type or playing status.

### ◆Front panel display of the recorder

Example: When playing a DVD



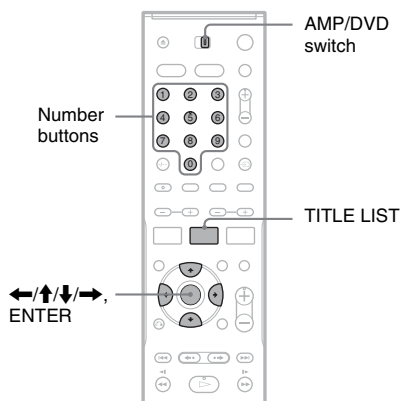
- Notes**
- Playing time of MP3 audio tracks may not be displayed correctly.
  - If you create a Playlist longer than “13:15:21,” the display is reset to “0:00:00” and restarts counting.

# Changing the Name of a Recorded Programme (Title Input)

**+RW** **-RWVR** **-RWVideo** **+R** **-R**

The titles recorded on a disc are named sequentially ([Title 1], [Title 2], ...) by default. You can rename titles using the display for entering characters, which also appears for renaming a disc or station.

Up to 21 characters can be entered for a title or disc name and 5 characters for a station name, but the actual number of characters displayed in menus such as the Title List will vary.



**1 Set the AMP/DVD switch to DVD, and press TITLE LIST to turn on the Title List.**

For details about the Title List, see page 33.

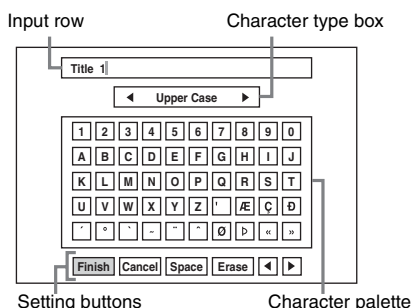
**2 Select a title and press ENTER.**

**3 Select [Edit] from the sub-menu and press ENTER.**

Edit options for the selected title appear.

**4 Select [Title Name] and press ENTER.**

The display for entering characters appears. The default title name is displayed in the input row.



- Press **←/→** to move between the setting buttons. To move between the setting buttons, character palette, and character type box on the display, press **↑/↓**.
- To move the cursor to the left or right within the input row, select **[←]** or **[→]** and press **ENTER**.
- To erase a character, move the cursor to the right of the character in the input row. Select **[Erase]** and press **ENTER**.

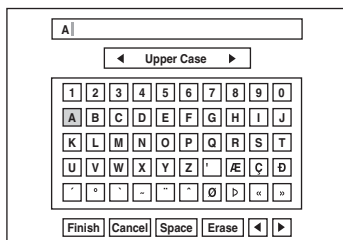
**5 Move to the character type box and press ←/→ to select a character type.**

You can select **[Upper Case]**, **[Lower Case]**, or **[Symbol]**.

The character palette switches according to the character type you select.

**6 Move to the character palette, press ←/↑/↓/→ to select the character, and press ENTER.**

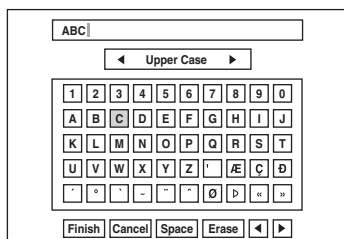
The selected character appears in the input row.



- To enter a letter with an accent mark, select the letter followed by an accent. Example: Select "a" and then " ` " to enter "à."

- To insert a space, select [Space] and press ENTER.
- To insert a character, move the cursor to the right of the position where you want to insert the character. Select the character from the character palette and press ENTER.

## 7 Repeat steps 5 and 6 to enter the remaining characters.



- If you want to return to the Title List without renaming the title, select [Cancel] and press ENTER.

## 8 Select [Finish] and press ENTER.

### To use the number buttons

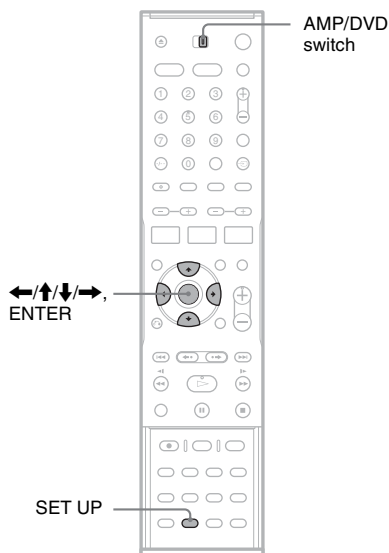
You can also use the number buttons to enter characters.

- 1 Select the row containing the character to be input and press a number button.

Example: To input "MT"  
Select the "K, L, M, N, O, P, Q, R, S, T" row.  
Press the number 3 button, followed by the number 0 button.

- 2 Select [Finish] and press ENTER.

## Labelling and Protecting a Disc

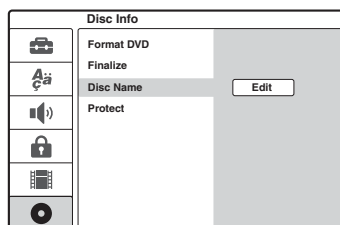


### Labelling a disc

+RW -RWVR -RWVideo +R -R

A disc is automatically labelled as its disc type.  
You can change the disc name (up to 21 characters).

- 1 Insert a disc.
- 2 Set the AMP/DVD switch to DVD, and press SET UP to turn on the Setup Display.
- 3 Select [Disc Info] and press →.
- 4 Select [Disc Name] and press →.



- 5 While [Edit] is selected, press ENTER.**  
The display for entering characters appears.  
To enter characters, see page 37.


### Note

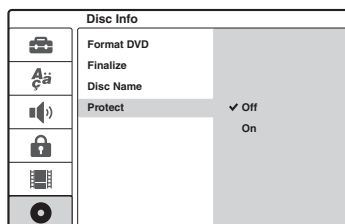
Label the disc before you finalize it. Once a disc is finalized, you cannot change the disc name.

## Protecting a Disc

**+RW -RWVR +R**

You can protect all titles on the disc to prevent accidental recording, editing, or erasing.

- 1 Insert a disc.**
- 2 Set the AMP/DVD switch to DVD, and press SET UP to turn on the Setup Display.**
- 3 Select  [Disc Info] and press →.**
- 4 Select [Protect] and press →.**



- 5 Select [On] and press ENTER.**

### To cancel the protection

Repeat the steps above, and select [Off] and press ENTER in step 5.

### Hint

For DVD+RWs and DVD+Rs, you can set protection for individual titles (page 66).

## Playing a DVD on Other Equipment (Finalize)

**+RW -RWVR -RWVideo +R -R**

Finalizing is necessary when you play discs recorded with this recorder on other DVD equipment.

When you finalize a DVD+RW, DVD-RW (Video mode), DVD+R, or DVD-R, a DVD menu will be automatically created, which can be displayed on other DVD equipment.

Before finalizing, check the differences between the disc types in the table below.

### Differences between the disc types

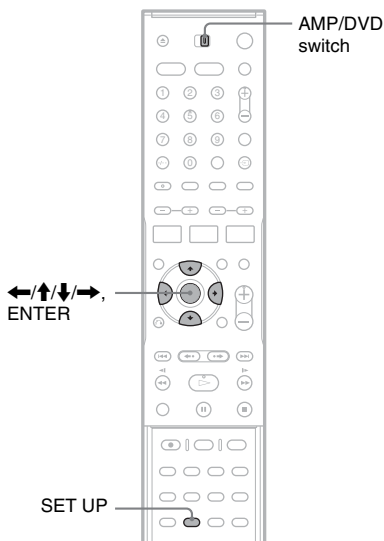
**+RW** Discs are automatically finalized when removed from the recorder. However, you may need to finalize the disc for certain DVD equipment, or if the recording time is short. You can edit or record on the disc even after finalizing.

**-RWVR** Finalizing is unnecessary when playing a disc on VR format compatible equipment. Even if your other DVD equipment is VR format compatible, you may need to finalize the disc, especially if the recording time is short. After finalizing, you cannot edit or record on the disc. If you want to edit or record on it again, unfinalize the disc.

**-RWVideo** Finalizing is necessary when playing on any equipment other than this recorder. After finalizing, you cannot edit or record on the disc. If you want to edit or record on it again, unfinalize the disc.

**+R** Finalizing is necessary when playing on any equipment other than this recorder. After finalizing, you cannot edit or record on the disc.

**-R**



## To unfinalize a DVD-RW

If you cannot record or edit on a DVD-RW that has been finalized (a message appears), unfinalize the disc by selecting [Unfinalize] in step 5 above.

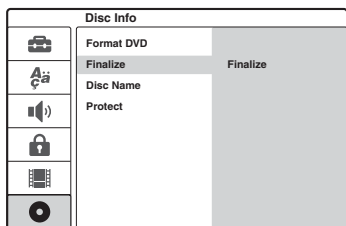
### Hint

You can check whether the disc has been finalized or not. If you cannot select [Finalize] in step 5 above, the disc has already been finalized.

### Notes

- The time required for finalizing depends on the disc type, recording time, or the number of titles recorded on the disc.
- Depending on the condition of the disc, recording, or the DVD equipment, discs may not play even if the discs are finalized.
- The recorder may not be able to finalize the disc if it was recorded on another recorder.
- If the recording time is short, the disc may not be playable on some DVD players.

- 1 Insert a disc.
- 2 Set the AMP/DVD switch to DVD, and press SET UP to turn on the Setup Display.
- 3 Select [Disc Info] and press  $\rightarrow$ .
- 4 Select [Finalize] and press  $\rightarrow$ .



- 5 Select [Finalize] and press ENTER.

The display asks for confirmation.

- 6 Select [OK] and press ENTER.

The recorder starts finalizing the disc. Approximate remaining time for finalizing appears on the screen. Some discs may require more time than is indicated.

- 7 Press ENTER when [OK] appears.



## Recording

# Before Recording

## Before you start recording...

- This recorder can record on various discs. Select the disc type according to your needs (page 8).
- Use the Title List to check the available recording time for the disc (page 33). For DVD+RWs and DVD-RWs, you can erase titles to free up disc space (page 63).

## Hints

- Up to 49 titles can be recorded on a DVD+RW or DVD-R. For other recordable discs, 99 titles.
- When using a DVD+RW, you can overwrite a previously recorded title (page 49).
- You can select the picture size to be recorded on DVD-RWs (VR mode). Select [4:3] or [16:9] for [Rec Aspect Ratio] in [Rec Setting] Setup (page 82).

## Recording mode

Like the SP or LP recording mode of VCRs, this recorder has four different recording modes. Select a recording mode according to the time and picture quality you need. For example, if picture quality is your top priority, select the High Quality mode (HQ). If recording time is your priority, Super Long Play mode (SLP) can be a possible choice.

## Press REC MODE repeatedly to switch the recording modes.

Note that the recording time in the following table is an approximate guide.


Recording mode	Recording time (minute)
HQ (High quality)	60
SP (Standard mode)	↑ 120
EP	↓ 240
SLP (Long duration)	360

## Notes

- Situations below may cause slight inaccuracies with the recording time.
  - Recording a programme with poor reception, or a programme or video source of low picture quality.
  - Recording on a disc that has already been edited.
  - Recording only a still picture or just sound.
- The available remaining recording time displayed is an estimate and the actual time may differ.

## Recording stereo and bilingual programmes

This recorder can receive and record stereo and bilingual programmes based on the ZWEITON system or the NICAM system.

Before you start recording bilingual programmes, press the  (audio) button repeatedly to select the audio channel (Main+Sub, Main, or Sub). The selected channel is displayed on the TV screen and applied to the recording. For timer recordings, “Main+Sub” is automatically selected. Note that you cannot switch the audio channel while recording.

## ZWEITON (German stereo) system

When a stereo or bilingual ZWEITON based programme is received, “ST” or “BIL” appears in the front panel display.

## NICAM system

When a stereo or bilingual NICAM based programme is received, “NICAM” appears in the front panel display.

To record a NICAM programme, be sure to set [NICAM/Standard] of [Channel Settings] in [Settings] Setup to on (default). If the sound is not clear when listening to NICAM broadcasts, set [NICAM/Standard] to off (see “[Channel Settings]” on page 75).

## Hints

- When playing on other DVD equipment, you may not be able to switch between the main and sub sounds for bilingual programmes. Select either “Main” or “Sub” before you start recording if you plan to play the disc on other DVD equipment.
- You can switch the audio channel and select the speaker output (page 89).

# Unrecordable pictures

Pictures with copy protection cannot be recorded on this recorder.

When the recorder receives a copy guard signal, the recorder stops recording.

Copy control signals	Recordable discs
Copy-Free	<div>+RW</div> <div>-RWVR</div> <div>-RW<sub>video</sub></div> <div>+R</div> <div>-R</div>
Copy-Once	<div>-RWVR</div> <div>Ver.1.1, Ver.1.2 with CPRM*</div>
Copy-Never	None

\* The recorded disc can be played only on CPRM compatible equipment.

# Timer Recording (Standard and VIDEO Plus+)

+RW

-RWVR

-RW<sub>video</sub>

+R

-R

You can set the timer for a total of seven programmes, up to one month in advance.

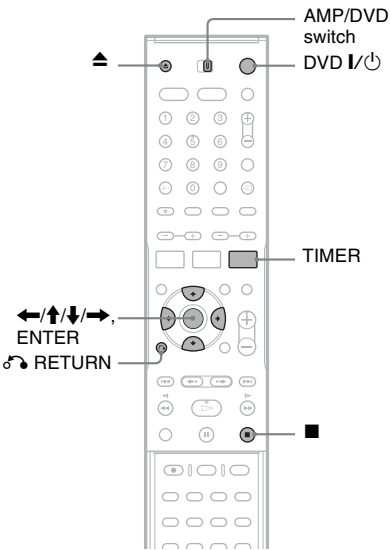
There are two methods to set the timer: the standard method and VIDEO Plus+ method.

- Standard: Set the date, time, and programme position of the programme manually.
- VIDEO Plus+: Enter the PlusCode number designated for each TV programme (page 44).

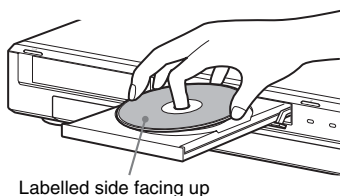
## Notes

- Timer recordings cannot be made if the recorder is turned on.
- While recording, you cannot set additional timer recordings.

# Setting the timer manually (Standard)



- 1 Press  $\blacktriangle$  (open/close), and place a recordable disc on the disc tray.**



- 2 Press  $\blacktriangle$  (open/close) to close the disc tray.**

Wait until "LOADING" disappears from the front panel display.

For details on how to insert and format a new disc, see "Inserting and Formatting a Disc" (page 31).

- 3 Set the AMP/DVD switch to DVD, and press **TIMER**.**

Timer Standard							100 Min Free
PR	Date	Start	Stop	Mode	Repeat	PDC/VPS	
12	12/4 Tue	19:20	19:50	SP	Today	Off	

- If the Timer List or [Video Plus +] menu appears, press **TIMER** repeatedly to switch the display to [Timer Standard].

- 4 Press  $\leftarrow/\rightarrow$  to select an item and press  $\uparrow/\downarrow$  to adjust the setting.**

[PR]: Selects the programme position or input source.

[Date]: Sets the date up to one month in advance.

[Start]: Sets the start time.

[Stop]: Sets the stop time.

[Mode]: Selects the recording mode (page 41). If you select [AT], you can use the Rec Mode Adjust function. See "Rec Mode Adjust" on page 44.

[Repeat]: Selects a repeat option from [Today], [Mon-Fri], and [Weekly].

[PDC/VPS]: Sets the PDC/VPS function. See "About the PDC/VPS function" below.

- If you make a mistake, select the item and change the setting.

- 5 Press **ENTER**.**

The Timer List appears with the timer setting you made.

Timer List						* : PDC/VPS
PR	Date	Start	Length	Mode	Check	
12	12/4 Tue	19:20	30	SP	Rec. OK	

To make another timer setting, press **TIMER** to return to the [Timer Standard] menu and repeat steps 4 and 5.

- 6 Press  $\hookrightarrow$  **RETURN** to turn off the Timer List.**

- 7 Press **DVD I/** to set your recorder to standby mode.**

The **TIMER REC** indicator lights up on the front panel and the recorder is ready to start recording.

### To stop recording during timer recording

Press **■**. Note that it may take a few seconds for the recorder to stop recording.

### About the PDC/VPS function

PDC/VPS signals are transmitted with TV programmes in some broadcast systems. These signals ensure that timer recordings are made regardless of any broadcast delays, early starts, or broadcast interruptions.

### ◆To use the PDC/VPS function

Set [PDC/VPS] to [On] in step 4 above. [\*] appears next to the [Start] time of the timer setting in the Timer List.

When you turn on this function, the recorder starts scanning the channel before the timer recording starts. If you are watching TV when scanning starts, a message will appear on the TV screen. If you want to watch TV, switch to your TV's tuner.

## Rec Mode Adjust

If there is not enough available disc space for the recording, the recorder automatically selects the recording mode that will record the entire programme. To use this function, select [AT] for the recording mode and set [PDC/VPS] to [Off].

## If timer settings overlap

If timer settings overlap, [Dup. Date] will appear in the Timer List. For details, see “When timer settings overlap” (page 46).

## To confirm, change, or cancel timer recording

See “Checking/Changing/Cancelling Timer Settings (Timer List)” (page 46).

### Hints

- You can play the recorded programme by selecting the programme title in the Title List menu.
- You can use the recorder after setting the timer. Just press DVD I/⏻ to turn on the recorder. Press DVD I/⏻ again to set the recorder to standby mode before the timer recording starts.

### Notes

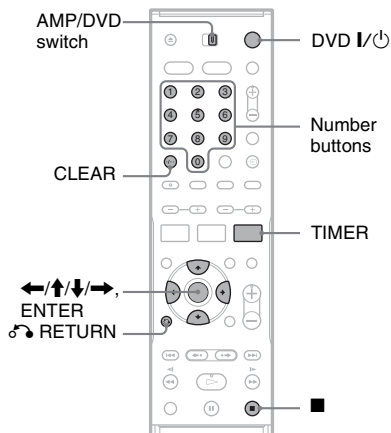
- Check that the clock is correctly set before setting the timer recording. If not, the timer recording cannot be made.

To record a satellite programme, turn on the satellite tuner and select the satellite programme you want to record. Leave the satellite tuner turned on until the recorder finishes recording.

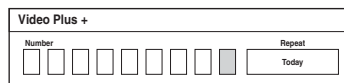
- The recorder must be in standby mode for the timer recording to be made.
- Even if the timer is set, timer recordings cannot be made while recording a programme that has priority.
- Even if the timer is set for the same daily or weekly programme, the timer recording cannot be made if it overlaps with a programme that has priority. [Dup. Date] will appear for the overlapped setting in the Timer List. Check the priority order of the settings (page 46).
- The Rec Mode Adjust function only works with a timer recording and the PDC/VPS function set to off. It does not function with Quick Timer (page 48).
- The beginning of some recordings may not be made when using the PDC/VPS function.
- If the TIMER REC indicator flashes on the front panel, check that a recordable disc is inserted correctly and available recording time on the disc is enough.

## Recording TV programmes using the VIDEO Plus+ system

The VIDEO Plus+ system is a feature that simplifies setting the timer. Just enter the PlusCode number listed in the TV programme guide. The date, time, and channel of that programme are set automatically. Check that the channels are correctly set in [Channel Settings] in [Settings] Setup (page 75).



- 1 Insert a recordable disc.
- 2 Set the AMP/DVD switch to DVD, and press TIMER twice.



- 3 Press the number buttons to enter the PlusCode number.
- If the Timer List or [Timer Standard] menu appears, press TIMER repeatedly to switch the display to [Video Plus+].
  - If you make a mistake, press CLEAR and re-enter the correct number.

#### 4 Press **→** to move to [Repeat], and press **↑/↓** to select a repeat option.

You can select [Today], [Mon-Fri], or [Weekly].

#### 5 Press **ENTER**.

The programme position, date, start and stop times, recording mode, repeat option, and PDC/VPS setting (page 43) appear.

Timer Standard						100 Min Free
PR	Date	Start	Stop	Mode	Repeat	PDC/VPS
12	12/4 Tue	19:20	19:50	SP	Today	Off

Press **←/→** to select an item and press **↑/↓** to change the setting, if necessary.

#### 6 Press **ENTER**.

The Timer List appears with the timer setting you made.

Timer List						* : PDC/VPS
PR	Date	Start	Length	Mode	Check	
12	12/4 Tue	19:20	30	SP	Rec. OK	

To make another timer setting, press **TIMER** to return to the [Video Plus +] menu and repeat from step 3 to 6.

#### 7 Press **↶** **RETURN** to turn off the Timer List.

#### 8 Press **DVD I/⏻** to set your recorder to standby mode.

The **TIMER REC** indicator lights up on the front panel and the recorder is ready to start recording.

#### To stop recording during timer recording

Press **■**. Note that it may take a few seconds for the recorder to stop recording.

#### If timer settings overlap

If timer settings overlap, [Dup. Date] will appear in the Timer List. For details, see “When timer settings overlap” (page 46).

#### To confirm, change, or cancel timer recording

See “Checking/Changing/Cancelling Timer Settings (Timer List)” (page 46).

#### 💡 Hints

- The Rec Mode Adjust function also works with this timer method (page 44).
- You can use the recorder after setting the timer. Just press **DVD I/⏻** to turn on the recorder. Press **DVD I/⏻** again to set the recorder to standby mode before the timer recording starts.

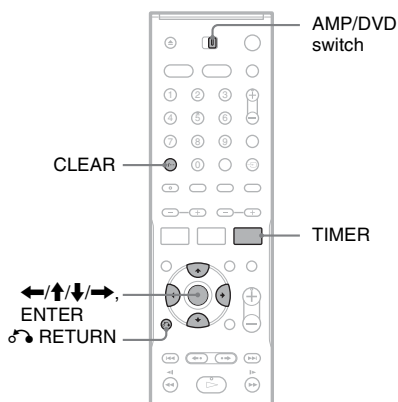
#### Notes

- Check that the clock is correctly set before setting the timer recording. If not, the timer recording cannot be made.
- The recorder must be in standby mode for the timer recording to be made.
- Even if the timer is set, timer recordings cannot be made while recording a programme that has priority.
- Even if the timer is set for the same daily or weekly programme, the timer recording cannot be made if it overlaps with a programme that has priority. [Dup. Date] will appear for the overlapped setting in the Timer List. Check the priority order of the settings (page 46).
- The beginning of some recordings may not be made when using the PDC/VPS function.
- If the **TIMER REC** indicator flashes on the front panel, check that a recordable disc is inserted correctly and available recording time on the disc is enough.

# Checking/Changing/ Cancelling Timer Settings (Timer List)

+RW -RWVR -RWVideo +R -R

You can check, change, or cancel timer settings using the Timer List menu.



## Changing the timer settings

The Timer List can contain up to seven timer settings. You can select a timer setting and modify it before the recording starts.

### 1 Set the AMP/DVD switch to DVD, and press **TIMER** repeatedly to turn on the Timer List.

All the timer settings are listed. You can check information such as the recording date, time, recording mode, etc.

Timer List						* : PDC/VPS
PR	Date	Start	Length	Mode	Check	
12	12/4 Tue	19:20	30	SP	Rec. OK	
12	13/4 Wed	20:00	30	SP	Dup. Date	
10	13/4 Wed	20:15	15	SP	Dup. Date	

- [Rec. OK] indicates that the timer recording will be made as you set. If the timer settings overlap, [Dup. Date] will appear.
- [\*] next to the [Start] time indicates that [PDC/VPS] is set to [On] (page 43).

### 2 Select a timer setting and press **ENTER**.

The programme position, date, start and stop times, recording mode, repeat option, and PDC/VPS setting for the selected timer setting appear.

### 3 Press **←/→** to select an item and press **↑/↓** to change the setting.

- If you want to return to the Timer List without changing, press **TIMER**.

### 4 Press **ENTER**.

The information for the selected timer setting is updated.

## Cancelling the timer settings

### 1 After step 1 above, select a timer setting and press **CLEAR**.

The display asks for confirmation.

### 2 Select **[OK]** and press **ENTER**.

The selected timer setting is deleted from the Timer List.

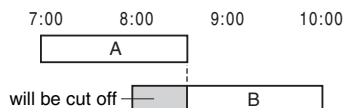
- If you want to cancel the deletion, select [Cancel] and press **ENTER** in step 2.

## To turn off the Timer List

Press **↶ RETURN**.

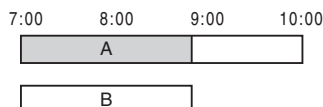
## When timer settings overlap

If a timer setting overlaps with another timer setting (i.e., [Dup. Date] appears in the Timer List), the programme that starts first has priority and the second programme starts recording only after the first programme has finished.



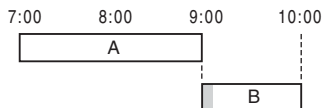
### ◆When recordings start at the same time

The programme that is set first has priority. In this example, timer setting A is set after B, so the first part of timer setting A will not be recorded.



◆ **When the end time of one recording and the start time of another are the same**

After finishing the previous recording, the other recording may be delayed.

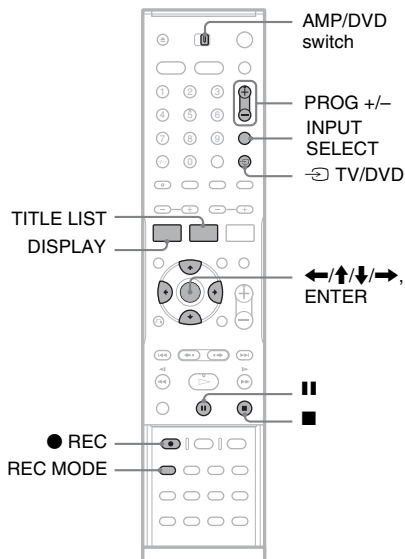


## Notes

- While recording, you cannot change the timer setting for the current recording.
- When [PDC/VPS] is set to [On] for one or more timer recordings, the start times may change in the event of a broadcast delay or early start.
- Even if the timer is set, timer recordings cannot be made while recording a programme that has priority.
- Even if the timer is set for the same daily or weekly programme, the timer recording cannot be made if it overlaps with a programme that has priority. [Dup. Date] will appear for the overlapped setting in the Timer List. Check the priority order of the settings.

# Recording Without the Timer

+RW -RWVR -RW<sub>Video</sub> +R -R



- 1 Insert a recordable disc.**
- 2 Press PROG +/- or INPUT SELECT to select the programme position or input source you want to record.**
- 3 Press REC MODE repeatedly to select the recording mode.**

Each time you press the button, the display changes on the TV screen as follows:

HQ → SP → EP → SLP

For details about the recording mode, see page 41.

- 4 Press ● REC.**

Recording starts and "●" (red) appears in the front panel display.

Recording continues until you stop the recording or the disc is full.

### To stop recording

Press **■**. Note that it may take a few seconds for recording to stop.

### To pause recording

Press **II**. To restart recording, press the button again.

### To watch another TV programme while recording

If your TV is connected to the LINE 1-TV jack, set your TV to the TV input using the **TV/DVD** button and select the programme you want to watch. If your TV is connected to the LINE 2 OUT or COMPONENT VIDEO OUT jacks, set the TV to TV input using the **TV/DVD** button (page 98).

#### Hint

If you do not want to watch TV while recording, you can turn off the TV. When using a decoder, make sure to leave it on.

### Notes

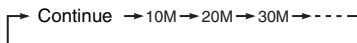
- After pressing **● REC**, it may take a short while to start recording.
- You cannot change the recording mode while recording or during recording pause.
- If there is a power failure, the programme you are recording may be erased.
- You cannot watch a PAY-TV/Canal Plus programme while recording another PAY-TV/Canal Plus programme.

## Using the Quick Timer function

You can set the recorder to record in 10-minute increments.

### Press **● REC** repeatedly to set the duration.

Recording starts after the first press. The Quick Timer starts from the second press, and then each additional press increases the recording time by 10 minutes within the available free space on the disc.



The remaining recording time appears momentarily on the TV screen. The time counter in the front panel display decreases to 0:00 (or when the disc is full), then the recorder stops recording (power turns off).

### To check the Quick Timer

Press **● REC** once while recording. The remaining recording time and other recording information (programme position, recording mode, etc.) appear momentarily on the TV screen.

### To cancel or stop the Quick Timer

To return the recorder to normal recording mode, press **● REC** twice while recording. [Continue] appears momentarily on the TV screen. To stop recording, press **■**. Note that it may take a few seconds for recording to stop.

### To extend the Quick Timer

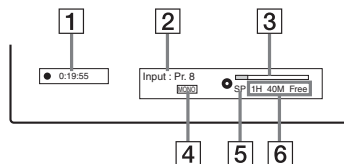
Press **● REC** repeatedly while recording. After the recorder returns to normal recording mode, the recording time extends by 10 minutes (up to the capacity of the disc).

## Checking the disc status while recording

You can check recording information such as recording time or recording mode, etc.

### Set the AMP/DVD switch to DVD, and press **DISPLAY** during recording.

Recording information appears on the TV screen.



- 1 Elapsed recording time
- 2 Programme position or input source
- 3 Recording status bar
- 4 Audio channel
- 5 Recording mode
- 6 Available recording time for the disc

Press **DISPLAY** to turn off the display.

#### Hint

While recording, you can check the recording time and other information, such as disc type/format, title/chapter



number, etc., shown in the front panel display (page 111).

## Creating chapters in a title

The recorder automatically divides a recording (a title) into chapters by inserting chapter marks at 5, 10, or 15-minute intervals during recording. Select the interval, [5Min], [10Min], or [15Min] for [Auto Chapter] in [Rec Setting] Setup (page 82).

### Hint

You can create chapters manually when playing a DVD+RW, DVD-RW (VR mode), or DVD+R (page 68).

## Overwriting a recorded title

**+RW**

You can use the Title List to make a new recording over a title previously recorded on the disc. For details about the Title List, see page 33.

- 1 Insert a DVD+RW.
- 2 Set the AMP/DVD switch to DVD.
- 3 Press **PROG +/-** or **INPUT SELECT** to select a programme position or input source.
- 4 Press **TITLE LIST** to turn on the Title List.
- 5 Press **←/↑/↓/→** to select the title you want to overwrite.
- 6 Press **● REC**.  
Recording starts.

### To stop recording

Press **■**. Note that it may take a few seconds for recording to stop.

### Hint

If you erase a title from a DVD+RW, it appears as [Erased title] in the Title List. However, this will not increase the remaining time on the disc. You can select [Erased title] from the Title List and make a new recording on top of it (page 65).

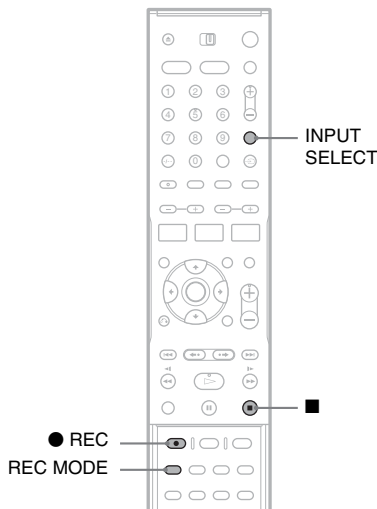
### Notes

- A protected title cannot be overwritten (page 66).
- If the selected title is shorter than the new recording, or less than ten seconds, the recorder automatically overwrites the next title in the Title List. If you do not want a title to be overwritten, protect the title (page 66).

## Recording From Connected Equipment

**+RW** **-RWVR** **-RWVideo** **+R** **-R**

You can record from a connected VCR or similar device. To connect a VCR or similar device, see “Connecting a VCR or similar device” (page 24). Use the DV IN jack on the front panel if the equipment has a DV output jack (i.LINK jack).



- 1 Insert a recordable disc.
- 2 Press **INPUT SELECT** to select an input source according to the connection you made.  
The front panel display changes as follows:  
TV programme position → LINE1 → LINE2 → LINE3 → LINE4 → DV  
↑
- 3 Press **REC MODE** repeatedly to select the recording mode.  
The recording mode changes as follows:  
HQ → SP → EP → SLP  
↑
- 4 Insert the source tape into the connected equipment and set to playback pause.

## **5 Press ● REC on this recorder and the pause or play button on the connected equipment at the same time.**

Recording starts.

To stop recording, press ■ on this recorder.

---

### **If you connect a digital video camera with a DV IN jack**

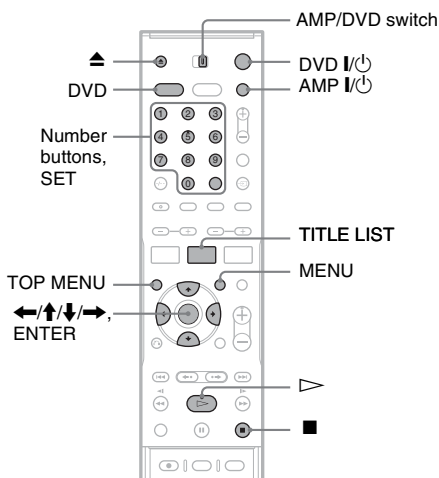
See “DV Dubbing” (page 70) for an explanation of how to record from the DV IN jack.

#### **Notes**

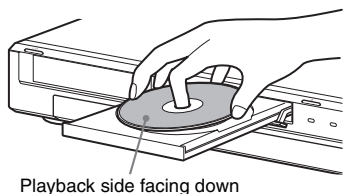
- When recording a video game image, the screen may not be clear.
- Any programme that contains a Copy-Never copy guard signal cannot be recorded. The recorder automatically stops recording after a few seconds.

# Playing DVDs and VIDEO CDs

+RW -RWVR -RWVideo +R -R DVD  
VCD



- 1 Turn on the TV and set it to video input.
- 2 Press AMP I/O to turn on the speaker system.  
If "FM" or "AM" appears on the centre unit display, press DVD on the remote to display "DVD."
- 3 Press ▲ (open/close), and place a disc on the disc tray.

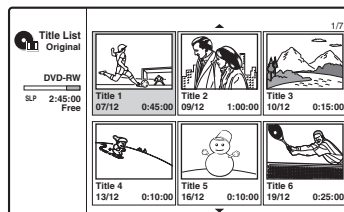


- 4 Press ▲ (open/close) to close the disc tray.  
If you inserted a DVD VIDEO or VIDEO CD, press ▷. Playback starts automatically depending on the disc.

## 5 Set the AMP/DVD switch to DVD, and press TITLE LIST.

For details about the Title List, see "Viewing Recorded TV Programmes (Title List)" (page 33).

Example: DVD-RW (VR mode)



## 6 Select a title, and press ENTER.

The sub-menu appears.

## 7 Select [Play], and press ENTER.

Playback starts from the selected title on the disc.

## To select a chapter from the Chapter List (DVD+RW, DVD-RW (VR mode), and DVD+R only)

- 1 Select [Chapter List] from the sub-menu in step 7 above.  
The Chapter List of the selected title appears. For details about the Chapter List, see page 34.
- 2 Select the chapter and press ENTER.
- 3 Select [Play] from the sub-menu, and press ENTER.  
Playback starts from the selected chapter.

## To use the DVD's Menu



When you play a DVD VIDEO, or a finalized DVD+RW, DVD-RW (Video mode), DVD+R, or DVD-R, you can display the disc's menu by pressing TOP MENU or MENU.

## To play VIDEO CDs with PBC functions

PBC (Playback Control) allows you to play VIDEO CDs interactively using the menu on your TV screen.

When you start playing a VIDEO CD with PBC functions, the menu appears. Select an item using the number buttons and press ENTER. Then, follow the instructions in the menu (press ▷ when "Press SELECT" appears).

## To save the power in standby mode


Press AMP  and/or DVD  while the system turns on. To cancel standby mode, press the button once.


## To stop playback

Press .

## To resume playback from the point where you stopped the disc (Resume Play)

The recorder stores the point where you stopped the disc even if the disc is removed or the recorder turns off.

Press  once to stop playback. When you play the disc next time, the recorder resumes playback from the point where you stopped the disc.

To start from the beginning, press  twice.

Playback starts from the beginning of the title/track/scene.

The point where you stopped playing is cleared when:

- you play another title.
- you edit the title after stopping playback.
- you change the settings on the recorder.
- you make a recording.


## To play restricted DVDs (Parental Control)

If you play a restricted DVD, the message [Playback limited by Parental Control.] and the display for entering your password appear on the TV screen.

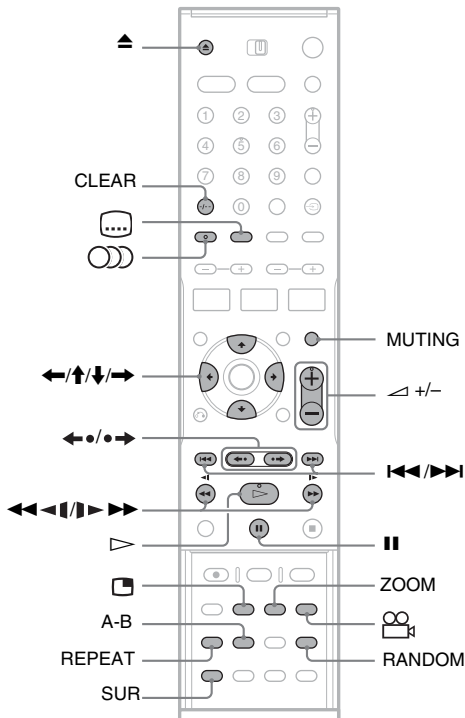
- 1 Enter your four-digit password using the number buttons.
- 2 Press SET to select [OK].  
The recorder starts playback.






To register or change the password, see “Parental Control Settings” (page 81).

## Hints

- To play without PBC functions, set [PBC] to [Off] in [Settings] Setup (page 78). VIDEO CDs are played in continuous play mode only.
- You can also use the  button in step 7 (page 51) to start playback.
- To play a title including hidden chapters on a DVD+RW or DVD+R, select [Full Play] in step 7 (page 51). For details about hidden chapters, see page 68.


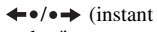


















Playback options




Buttons	Operations	Discs
 (open/close)	Stops playing and opens the disc tray.	All discs
 (pause)	Pauses playback.	All discs
 (previous)/  (next)	Goes to the beginning of the previous/next title/ chapter/scene/track.	All discs
 (fast reverse/fast forward)	Fast reverses/fast forwards the disc when repeatedly pressed during playback. Search speed changes as follows: <div><div>fast reverse</div><div>FR1 ← → FF1</div><div>FR2 ← ← → → FF2</div><div>FR3 ← ← ← → → → FF3</div><div>FR4*<sup>1</sup> ← ← ← ← → → → → FF4*<sup>1</sup></div></div>	All discs  * <sup>1</sup> FR4 and FF4 are not available for VIDEO CDs.


All discs

\*<sup>1</sup>FR4 and FF4 are not  
available for VIDEO  
CDs.

Buttons	Operations	Discs
 (slow)	Plays in slow motion when pressed repeatedly in pause mode. Playback speed changes as follows: <div style="text-align: center;">             reverse slow*<sup>2</sup>      forward slow              SR1 ←                      → SF1              SR2 ← ←                    → → SF2              SR3 ← ← ←                → → → SF3              SR4 ← ← ← ←            → → → → SF4*<sup>2</sup> </div>	All discs * <sup>2</sup> SR1-SR4 and SF4 are not available for VIDEO CDs.
 (instant replay/instant advance)	Replays the scene/briefly fast forwards the scene.  will advance the image frame by frame in pause mode.	<div style="display: flex; justify-content: space-around;"> <div></div> <div></div> <div></div> </div> <div style="display: flex; justify-content: space-around;"> <div></div> <div></div> <div></div> </div>
 (audio)	Selects one of the audio tracks recorded on the disc when pressed repeatedly. <div style="border: 1px solid black; padding: 2px; display: inline-block;">DVD</div> : Selects the language. <div style="display: flex; justify-content: space-around; align-items: center;"> <div></div> <div></div> <div></div> <div></div> <div></div> <div><div style="border: 1px solid black; padding: 2px; display: inline-block;">VCD</div></div> </div> Selects one of the recorded audio tracks.	All discs
SUR (Surround)	Switches the Surround effect on ([SUR ON]) or off ([SUR OFF]) when pressed during playback. Surround lets you enjoy virtual surround sound effects created from the front left and right speakers. This function is for equipment connected to the LINE output jacks.	All discs
 (subtitle)	Selects a subtitle language when pressed repeatedly.	<div style="border: 1px solid black; padding: 2px; display: inline-block;">DVD</div>
 (angle)	Selects an angle when pressed repeatedly. “  ” appears briefly at the scene where the angle to be changed. If various angles (multi-angles) for a scene are recorded on the disc, “  ” appears in the front panel display.	<div style="border: 1px solid black; padding: 2px; display: inline-block;">DVD</div>
MUTING	Mutes the sound when using the speaker system. To cancel, press MUTING again or  +.	All discs

To resume normal playback, press .

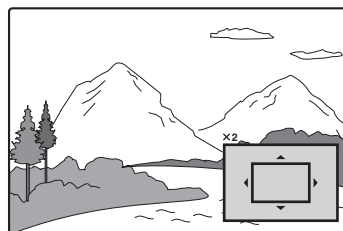
### Notes

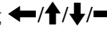
- If  appears, the operation is not available on the disc.
- When playing the discs recorded on this recorder, angles and subtitles cannot be changed.
- For a Super VCD, you cannot select audio track 2 if one is recorded on the disc.
- When playing DVD-RWs (VR mode), surround effect may be lost in some Sound Field settings.

### To enlarge a video image (Zoom)

Press ZOOM repeatedly while viewing the picture as follows:

×2 size → ×4 size → normal size



You can move the image using .  
 To resume normal playback, press CLEAR.

## Note

The zoom function may not work depending on the disc.

## To play repeatedly

Press REPEAT repeatedly to select an item to be repeated.

[Chapter]: Repeats the current chapter. (DVD only)

[Title]: Repeats the current title. (DVD only)

[Track]: Repeats the current track. (VIDEO CD only)

[All]: Repeats all the tracks on the disc. (VIDEO CD only)

[Off]: Does not play repeatedly.

## Notes

- For a VIDEO CD with PBC function, set [PBC] to [Off] in [Settings] Setup (page 78).
- If you press ◀◀/▶▶ (previous/next), ■ (stop), or ◀● (instant replay) during Repeat Play, Repeat Play is cancelled.

## To repeat a specific portion (A-B)

You can play a specific portion of a title, chapter, or track repeatedly.

- 1 During playback, when you find the starting point (point A) of the portion to be repeated, press A-B.  
[A-] appears on the TV screen.
- 2 When you reach the ending point (point B), press A-B again.  
[A-B] appears and the recorder starts repeating this specific portion.  
To return to normal playback, press A-B to select [Off].

## Note

A-B Repeat Play may not work properly with some Super VCDs.

## To play in random order (VIDEO CD or Karaoke DVD only)

Press RANDOM during playback. [RANDOM] appears on the TV screen.

To return to normal playback, press RANDOM again.

## Hint


To play another title in random order, press ◀◀/▶▶.

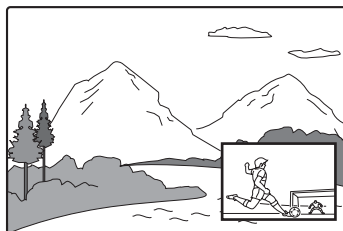
## Note

For a VIDEO CD with PBC function, set [PBC] to [Off] in [Settings] Setup (page 78).

## To watch TV in the sub picture during playback (Picture-in-Picture)

You can view a TV programme in the sub picture while playing a disc.

Press  (Picture-in-Picture) during playback to turn on the sub picture on the TV screen.



To change the programme position or input source for the sub picture, press PROG +/- or INPUT SELECT.

To change the sub picture position, press ◀/▶. Each press moves the sub picture clockwise or counterclockwise.

To turn off the sub picture, press  again.

## Hint

If you watch TV in full screen, press ■ to stop playback.

## Notes on the recorder's surround function

- The SUR button on the remote works for LINE 1- TV jack, LINE 2 OUT (AUDIO L/R) jack, and LINE 3/DECODER jack output only. To enjoy the surround effects of the speaker system, see page 85.
- The function may not work with some discs.
- When you turn on this function, turn off the surround settings of the connected TV or amplifier (receiver).
- Make sure that your listening position is between and at an equal distance from your speakers, and that the speakers are located in similar surroundings.

## Note on playing DTS sound tracks on a CD

When playing DTS-encoded CDs, excessive noise will be heard from the LINE output stereo jacks. To avoid possible damage to the audio system, the consumer should take proper precautions when the LINE output stereo jacks of the recorder are connected to an amplification system. To enjoy

DTS Digital Surround™ playback, the supplied speaker system must be connected to the digital optical jack of the recorder.

### Note on playing DVDs with a DTS sound track

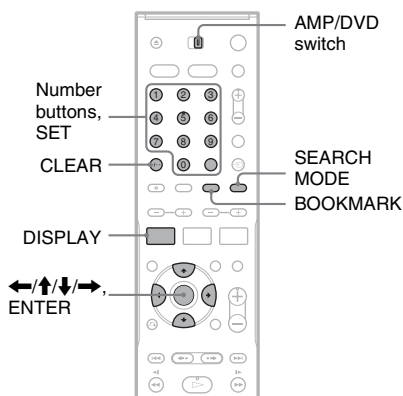
DTS audio signals are output only through the DIGITAL OUT jack.

When you play a DVD with DTS sound tracks, set [DTS] to [On] in [Audio] Setup (page 79).

## Searching for a Title/Chapter/Track, etc.

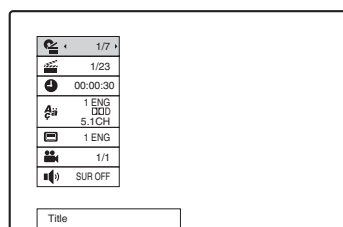


You can search a DVD by title or chapter, and VIDEO CD by track. As titles and tracks are assigned individual numbers on the disc, select the title or track by entering its number. You can also search for a scene using the time code.



### 1 Set the AMP/DVD switch to DVD, and press DISPLAY during playback.

The on-screen display appears.



### 2 Select a search item, and press ENTER.

- Title (for DVDs)
- Chapter (for DVDs)
- Track (for VIDEO CDs with PBC function off)
- Time (searches for the starting point of entered time code)



### 3 Press the number buttons to select the number of the title, chapter, time code, etc., you want.



For example: Time search

To find a scene at 2 hours, 10 minutes, and 20 seconds, enter “21020” and press SET.

If you enter the wrong number, press CLEAR to cancel the number, then select another number.

The recorder starts playback from the selected number or scene.

#### Hint

You can also search for the item using   in step 3 above. Press ENTER to start playback.

## Bookmarking a favourite scene

You can have the recorder store specific portions of the disc in memory and play immediately whenever you want. Up to nine bookmarks can be set.

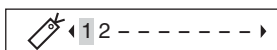
### To set a bookmark



During playback, press BOOKMARK when you find a scene to be bookmarked.

The bookmark number appears on the TV screen.



### To search for a bookmarked scene

- 1 Press SEARCH MODE.  
The bookmark search display appears.



- 2 Press   or the number buttons to select the bookmark number.  
Playback starts from the bookmarked scene you selected.
- 3 Press SEARCH MODE to turn off the display.

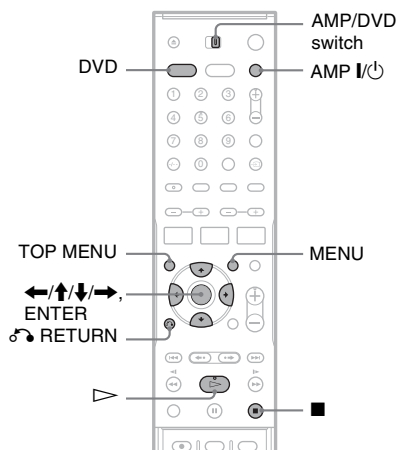
### To erase a bookmark

- 1 Press SEARCH MODE to turn on the bookmark search display.
- 2 Press   or the number buttons to select the bookmark number you want to erase, and press CLEAR.
- 3 Press SEARCH MODE to turn off the display.

## Playing Music CDs and MP3 Audio Tracks

**CD** **DATA CD**

The recorder can play MP3 audio tracks on DATA CDs (CD-ROMs/CD-Rs/CD-RWs). For details about MP3 audio tracks, see “About MP3 audio tracks” (page 60).



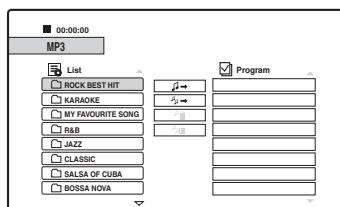
### 1 Press AMP I/O to turn on the speaker system.

If “FM” or “AM” appears on the centre unit display, press DVD to display “DVD.”

- When you use the list menu displayed on the TV screen, turn on the TV and set it to video input. You can easily select a track from the list.

### 2 Insert a disc.

The list menu appears on the TV screen.  
Example: DATA CDs



Playback starts automatically depending on the disc. When selecting a track, go to step 3.

### 3 Set the AMP/DVD switch to DVD, select an album, and press ENTER.

The list of tracks within the album appears.  
To return to the album list, select [ ] and press ENTER.

### 4 Select a track and press or ENTER.

Playback starts from the selected track.

### To stop playback

Press .

When you start playback the next time, the recorder resumes playback from the point where you stopped the track.

Press twice to play from the beginning of the disc/track.

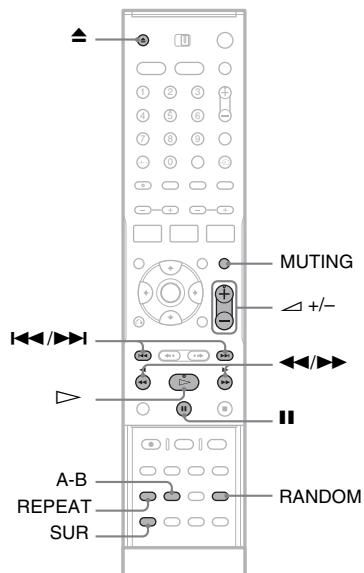
### Note on playing DTS sound tracks on a CD

When playing DTS-encoded CDs, excessive noise will be heard from the LINE output stereo jacks. To avoid possible damage to the audio system, the consumer should take proper precautions when the LINE output stereo jacks of the recorder are connected to an amplification system. To enjoy DTS Digital Surround™ playback, the supplied speaker system must be connected to the digital optical jack of the recorder.

### Hints

- For CDs, you can also select the track number by pressing the number buttons in step 3 above.
- Press to go to the next/previous page of the list.
- If you press RETURN, playback stops and the list menu disappears. To turn on the list menu again, press MENU.
- When the disc contains both MP3 audio tracks and JPEG image files, you can switch between lists. Press TOP MENU, then press to select [MP3] or [JPEG] on the top of the menu, and press ENTER.

## Playback options



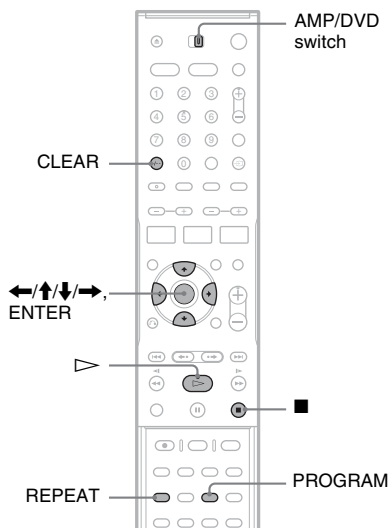
Buttons	Operations
(open/close)	Stops playing and opens the disc tray.
(stop)	Pauses playback.
(previous/next)	Goes to the beginning of the previous/next track.
(fast reverse/fast forward) (not available for DATA CDs)	Fast reverses/fast forwards the disc when repeatedly pressed during playback. Search speed changes as follows: <div style="text-align: center;"> fast reverse    fast forward  FR1 ←    → FF1  FR2 ← ←    → → FF2  FR3 ← ← ←    → → → FF3 </div>

Buttons	Operations
SUR (Surround)	Switches the Surround effect on ([SUR ON]) or off when pressed during playback. Surround lets you enjoy virtual surround sound effects created from the front left and right speakers. This function is for equipment connected to the LINE output jacks. (See the notes on Surround effect on page 55.)
MUTING	Mutes the sound when using the speaker system. To cancel, press MUTING again or $\triangle$ +.
RANDOM	Plays tracks in random order when pressed. [Random] appears.
REPEAT	Selects the item to be repeated when pressed repeatedly during playback. [TRACK]: Repeats the current track. [ALL]: Repeats all the tracks on the disc (CD) or album (DATA CD).
A-B (A-B Repeat)	Selects a specific portion to be repeated when pressed during playback. Press A-B to find the starting point (point A) of the portion. [A] appears. Press A-B again to reach the ending point (point B). [A-B] appears.

To resume normal playback, press  $\triangleright$ .  
To cancel the Random, Repeat, or A-B Repeat function, press the button again to turn off the indicator.

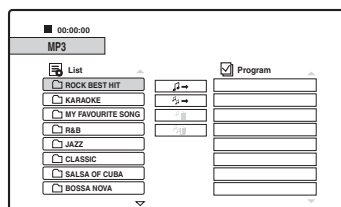
## Creating your own programme (Programme Play)

You can play the contents of a disc in the order you want by arranging the order of the tracks on the disc. Up to 99 tracks for CDs and 256 tracks for DATA CDs can be programmed. The programme is cleared when the disc is removed.



### 1 Insert a disc.

The list menu appears.  
Example: DATA CDs



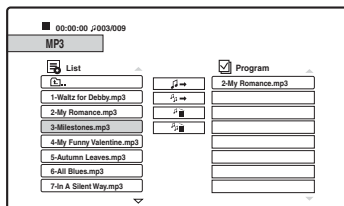
When selecting a track on a music CD, go to step 3.

### 2 Set the AMP/DVD switch to DVD, select an album, and press ENTER.

### 3 Select the track you want to programme.

### 4 Press PROGRAM, or press $\rightarrow$ to select [F→] (programme) and press ENTER.

The selected track is displayed on [Program] list.



## 5 Repeat steps 2 to 4 to add more tracks to the list.

To add all the tracks on the disc, select [  $\rightarrow$  ] (programme all) and press ENTER.

## 6 Select the track you want to start playing in [Program] list.

## 7 Press $\triangleright$ or ENTER to start Programme Play.

The tracks in the list are played in the programmed order.

Playback stops after all the tracks in the list are played.

## To erase a track from the [Program] list

1 Select the track from [Program] list.

2 Press CLEAR, or select [  $\rightarrow$  ] (erase) and press ENTER.

To erase all the tracks in the list, select [  $\rightarrow$  ] (erase all) and press ENTER.

## To repeat the programme

During Programme Play, press REPEAT to select the item to be repeated.

[TRACK]: Repeats the current track.

[ALL]: Repeats all the tracks on the list.

No display: Does not play repeatedly.

## To stop playback during Programme Play

Press  $\blacksquare$ .

## About MP3 audio tracks

MP3 is audio compression technology that satisfies certain ISO/MPEG regulations.

You can play back DATA CDs (CD-ROMs/CD-Rs/CD-RWs) recorded in MP3 (MPEG1 Audio Layer 3) format. However, the discs must be recorded according to ISO9660 Level 1, Level 2, or Joliet format for the recorder to recognize the tracks. You can also play discs recorded in Multi Session.

See the instructions supplied with the CD-R/CD-RW drives and the recording software (not supplied) for details on the recording format.

### Hints

- Playback stops when all the MP3 audio tracks within the album are played.
- Since a disc with many trees takes longer to start playback, it is recommended that you create albums with no more than two trees.

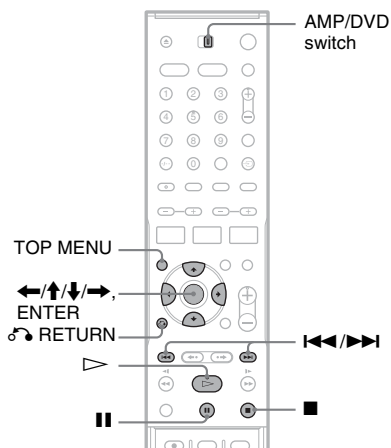
### Notes

- The recorder may not be able to play some DATA CDs created in the Packet Write format.
- The recorder will play any data with the extension “.MP3,” even if they are not in MP3 format. Playing this data may generate a loud noise which could damage your speaker system.
- The recorder does not conform to audio tracks in MP3PRO format.
- The recorder can recognize up to a total number of 999 albums and tracks in a DATA CD. The recorder may not recognize some discs depending on the recording device used for recording or the disc condition.
- The recorder can play MP3 audio tracks recorded in the following sampling frequencies: 32 kHz, 44.1 kHz, 48 kHz.
- Only the letters in the alphabet and numbers can be used for album or track names.
- ID3 tags cannot be displayed.

# Playing JPEG Image Files

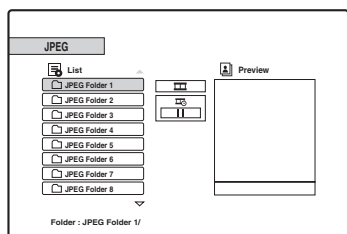
## DATA CD

You can play JPEG image files on DATA CDs (CD-Rs/CD-RWs). For details about JPEG image files, see “About JPEG image files” (page 62).



### 1 Insert a DATA CD.

The list menu appears on the TV screen.



When the disc contains both MP3 audio tracks and JPEG image files, you can switch between lists. Press TOP MENU. Press **←/→** to select [JPEG] on the top of the menu and press ENTER.

### 2 Set the AMP/DVD switch to DVD, select a folder, and press ENTER.

The list of files within the folder appears. To return to the folder list, select [⏮] and press ENTER.

### 3 Select the file you want to view.

The selected image is displayed in the preview window.

- If you set a slide show speed mode (⏮) other than [⏮] (off), the slide show starts from the selected file. See “Enjoying a slide show” below.

### 4 Press **▷** or ENTER.

The selected image is displayed in full screen.

#### To rotate a image

Press **↑/↓** while viewing the image. Each press rotates the image clockwise or counterclockwise by 90 degrees.

#### To view the previous or next image

Press **⏮/⏭** or **⏪/⏩**.

#### To return to the list menu

Press **■**.

#### 💡 Hints

- Press **↑/↓** to go to the next/previous page of the list.
- Press **⏮** RETURN repeatedly to turn off the list menu. To turn on the list menu, press MENU.

## Enjoying a slide show

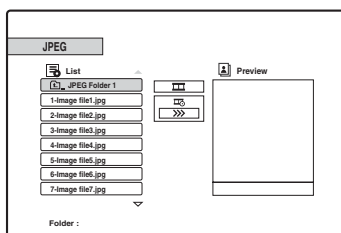
You can play JPEG image files on a DATA CD successively as a slide show.

### 1 Select the folder you want to view, and press ENTER.

### 2 Press **→** to select [⏮] (slide show).

### 3 Press **↓** to select [⏮] (play speed).


### 4 Press **←/→** to select a playing speed, **>>>** (fast), **>>** (normal), or **>** (slow), and press ENTER.



## 5 Select a file and press or ENTER.

Slide show starts from the selected image file.

To pause playback, press **II**.

To stop the slide show and return to the list menu, press **■** or  RETURN.

---

## About JPEG image files

JPEG is image compression technology.

You can play back DATA CDs (CD-ROMs/CD-Rs/CD-RWs) recorded in JPEG format. However, the discs must be recorded according to ISO9660 Level 1, Level 2, or Joliet format for the recorder to recognize the files.

You can also play discs recorded in Multi Session. See the instructions supplied with the CD-R/CD-RW drives and the recording software (not supplied) for details on the recording format.

### Hints

- If you add numbers (01, 02, 03, etc.) to the front of the files, the files will be played in that order.
- Since a disc with many trees takes longer to start playback, it is recommended that you create folders with no more than two trees.

### Notes

- The recorder can only play files with the extension “.JPG.”
- The recorder can recognize up to a total number of 999 folders and files in a disc. The recorder may not recognize some discs depending on the recording device used for recording or the disc condition.
- Depending on the disc or the size of image files, playback may take some time to start.
- The image size that the recorder can display is limited to  $8192 \times 7680$  pixels.
- Progressive and lossless compression JPEG image files are not supported.

## Before Editing

This recorder offers various edit options for various disc and title types. Before you edit, check these types and select an available option.

### Notes

- You may lose edited contents if you remove the disc while editing.
- Finish editing and recording before finalizing. No more editing or recording can be made on a finalized disc.
- If a message appears and indicates that the disc's control information is full, erase unnecessary titles.

## Edits for Video mode titles/original titles

**+RW** **-RWVR** **-RW<sub>video</sub>** **+R** **-R**

For Video mode titles on DVD+RWs/DVD-RWs (Video mode)/DVD+Rs/ DVD-Rs, and original titles on DVD-RWs (VR mode), the recorder edits actual recordings on the disc. You cannot undo any edits you make, and the original contents will be consequently lost.

### Hint

When using a DVD-RW (VR mode), you can keep the original contents by editing a Playlist (see "Edits for Playlist titles" below).

## To free up disc space (DVD+RW/DVD-RW (VR mode)/DVD-RW (Video mode) only)

You can utilize disc capacity by erasing Video mode or original titles. The effect differs depending on the disc type and location of the title, as follows.

Disc type	To open up disc space
DVD+RW	Erase the last title on the disc. You can erase and overwrite titles other than the last one; however, the display will not show the resulting capacity increase. Erased titles are shown as deleted in the Title List menu.
DVD-RW (VR mode)	Erase original titles anywhere on the disc.
DVD-RW (Video mode)	Erase the last title on the disc.
DVD+R/ DVD-R	You cannot increase the disc capacity, as they are non-rewritable.

### Note

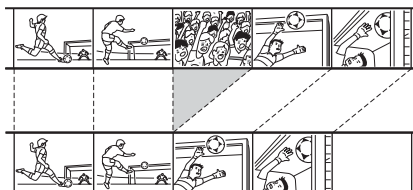
For DVD+RWs and DVD-RWs (VR mode), the disc's available capacity may not display correctly. The recorder displays only the available capacity after the last title on the disc.

## Edits for Playlist titles

**-RWVR**

For DVD-RWs (VR mode), you can edit a Playlist while retaining original titles (actual recordings on the disc). A Playlist is a group of Playlist titles created from the original title for editing purposes. When you create a Playlist, only the control information necessary for playback, such as the playback order, is stored on the disc. Since the original titles are left unaltered, Playlist titles can be re-edited.

Example: You have recorded the final few matches of a football tournament on a DVD-RW (VR mode). You want to create a digest with the goal scenes and other highlights, but you also want to keep the original recording.



In this case, you can select a title or chapter and create a Playlist title. You can even rearrange the scene order within the Playlist title (page 69).

### **Hint**

For DVD-RW (VR mode), you can display the disc's Playlist titles in Title List (Playlist), or the original titles in Title List (Original). Press TITLE LIST repeatedly to switch the two Title List menus.

## List of edit options

Select from the following options and refer to the pages in parentheses. Title type and disc type that the option can be applied are indicated in each section.

- Labelling a title (page 65).
- Erasing a title (page 65).
- Erasing a section of a title (A-B Erase) (page 65).
- Protecting a title (page 66).
- Dividing a title (page 66).
- Erasing a chapter (page 67).
- Combining chapters (page 67).
- Hiding a chapter (page 68).
- Creating chapters manually (page 68).
- Creating a Playlist title (page 68).
- Adding contents to an existing Playlist title (page 69).
- Rearranging chapters within a Playlist title (page 69).

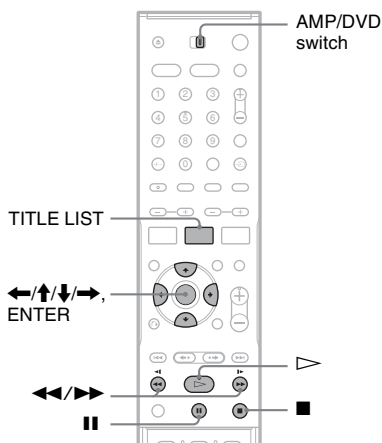
### **Note**

When selecting a title for editing, always note the above differences between the Video mode/original title edit and Playlist title edit.

## Erasing and Editing Titles

This section explains the basic edit functions common to Video mode titles, original titles, and Playlist titles.

Note that editing on Video mode and original titles is irreversible as they are the actual recordings on the disc. If you want to edit a DVD-RW (VR mode) while retaining the original contents, create and edit a Playlist (page 68).



### **Note**

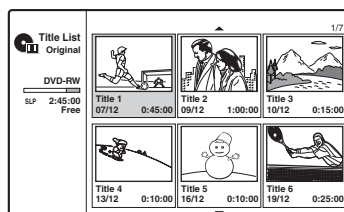
If you edit an original title after creating a Playlist title, the edits may affect the derived Playlist title.

## 1 Set the AMP/DVD switch to DVD, and press TITLE LIST to turn on the Title List.

The Title List menu appears and displays the disc contents.

When editing a DVD-RW (VR mode), press TITLE LIST repeatedly to switch the Title List (Original) and Title List (Playlist), if necessary.

Example: Title List (Original)





## 2 Select a title, and press ENTER.

The sub-menu appears with options available for the selected title.

[Chapter List]: Displays the Chapter List menu, which displays the title contents by chapter (see “Editing a Title by Chapter” on page 67).

[Erase]: Erases the title (page 65). For effects on disc capacity, see page 63.

[Protect]: Protects the title from erasure or alteration (page 66).

[Edit]: Displays the following options.

[Title Name]: Allows you to label the title (page 65).

[Divide]: Divides the title in two (page 66).

[A-B Erase]: Erases a section of the title (page 65).

[Playlist]: Allows you to create a new Playlist title, or add contents to an existing Playlist title (see “Editing a Playlist” on page 68).

## 3 Select an edit option, and press ENTER.

The selected option is applied to the title. See the pages in parentheses for the procedure.

### Labelling a title

+RW -RWVR -RWVideo +R -R

## 1 Select [Edit] in step 3 of “Erasing and Editing Titles,” and press ENTER.

## 2 Select [Title Name], and press ENTER.

The display for entering characters appears. You can enter up to 21 characters. Follow the explanations of “Changing the Name of a Recorded Programme (Title Input)” (page 37).



### Hint

You can label or re-label DVDs (page 38).

### Erasing a title

+RW -RWVR -RWVideo +R -R

## 1 Select [Erase] in step 3 of “Erasing and Editing Titles,” and press ENTER.

The display asks for confirmation.

## 2 Select [OK], and press ENTER.

The title is erased.



### Hints

- When you want to erase all titles, reformat the disc (page 31).
- After deleting a title on a DVD+RW, the title name is displayed as deleted in the Title List menu. You can select it to record over.

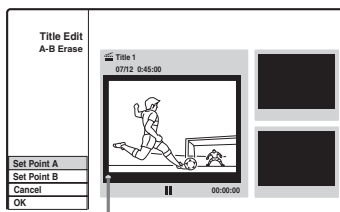
### Erasing a section of a title (A-B Erase)

-RWVR

## 1 Select [Edit] in step 3 of “Erasing and Editing Titles,” and press ENTER.

## 2 Select [A-B Erase], and press ENTER.

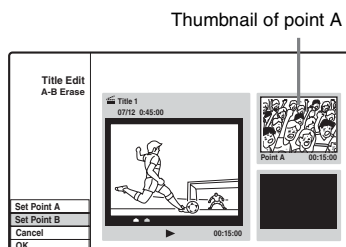
The following display appears.



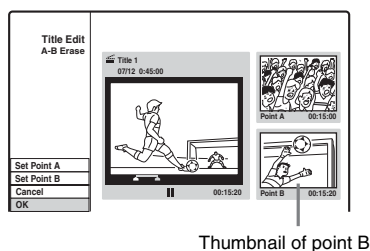
Current playback point

## 3 Press , and search for the scene you want to erase by pressing , , and .

- 4 Press ENTER at the start of the scene to be erased (point A).



- 5 Press ENTER at the end of the scene (point B).



To reset either point A or B, select [Cancel] and repeat from step 3.

- 6 Select [OK], and press ENTER.  
The display asks for confirmation.  
If you do not want to erase the scene, select [Cancel] and press ENTER.
- 7 Select [OK], and press ENTER.  
The scene is erased.

## Notes

- Images or sound may be momentarily interrupted at the point where you erase the scene.
- Sections shorter than five seconds may not be erased.
- The erased section may be slightly different from the points you selected.
- A chapter mark will not be made at the A–B erase point.

## Protecting a title from erasure or alteration

+RW +R

Select [Protect] in step 3 of “Erasing and Editing Titles,” and press ENTER.

The title is protected and [ ] (locked) appears in the Title List menu.

To cancel the protection, select [Protect] again.

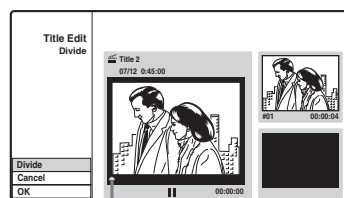
## Dividing a title

+RW

- 1 Select [Edit] in step 3 of “Erasing and Editing Titles,” and press ENTER.

- 2 Select [Divide], and press ENTER.

The display for setting the dividing point appears.



Current playback point

- 3 Press  $\blacktriangleright$ , and search for the point you want to divide by pressing  $\blacksquare$ ,  $\text{II}$ , and  $\blacktriangleleft$ .

- 4 Press ENTER at the dividing point.

To reset the point, select [Cancel] and repeat from step 3.

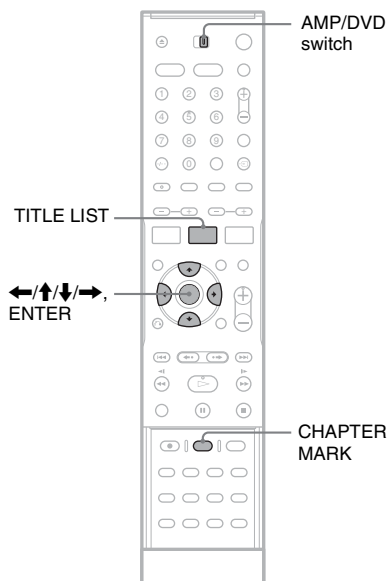
- 5 Select [OK], and press ENTER.

The title is divided in two. If you want to rename the title, see page 65.

If you do not want to divide the title, select [Cancel] and press ENTER.

# Editing a Title by Chapter

You can make detailed editing to a title by using the Chapter List menu that displays title contents by chapter.



## 1 Set the AMP/DVD switch to DVD, and press TITLE LIST to turn on the Title List.

When editing a DVD-RW (VR mode), press TITLE LIST repeatedly to switch the Title List (Original) and Title List (Playlist), if necessary.

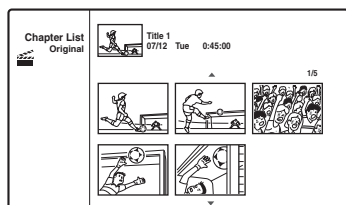
## 2 Select a title, and press ENTER.

The sub-menu appears.

## 3 Select [Chapter List], and press ENTER.

The Chapter List menu appears with contents of the selected title (displayed as chapters).

Example: Chapter List (Original)



## 4 Select a chapter, and press ENTER.

The sub-menu appears with options available for the selected chapter.

[Title List]: Displays the Title List menu (see “Erasing and Editing Titles” on page 64).

[Erase]: Erases the chapter (page 67).

[Edit]: Displays the following options.

[Combine]: Combines two chapters into one (page 67).

[Hide/Show]: Hides the chapter/Shows the hidden chapter (page 68).

[Move]: Allows you to change the chapter order within the title. Follow the same instructions in step 6 of “Rearranging chapters within a Playlist title” (page 69).

## 5 Select an edit option, and press ENTER.

The selected option is applied to the chapter. See the pages in parentheses for the procedure.

DVD Edit

## Erasing a chapter

-RWVR

### 1 Select [Erase] in step 5 of “Editing a Title by Chapter,” and press ENTER.

The display asks for confirmation.

### 2 Select [OK], and press ENTER.

The chapter is erased.

## Combining chapters

+RW

-RWVR

+R

### 1 Select [Edit] in step 5 of “Editing a Title by Chapter,” and press ENTER.

### 2 Select [Combine] and press ENTER.

The selected chapter is combined with the next chapter in the Title List.

### Note

If the next chapter on the DVD+RW or DVD+R is hidden, show the chapter in the Title List before combining. See “Hiding a chapter” (page 68).

---

## Hiding a chapter

+RW

+R

You can skip playing chapters without deleting from the disc.

**1** Select [Edit] in step 5 of “Editing a Title by Chapter,” and press ENTER.

**2** Select [Hide], and press ENTER.

The chapter is displayed shaded in the Chapter List menu.

---

### To play a title including hidden chapters

Select [Full Play] in step 3 of “Editing a Title by Chapter,” and press ENTER.

### To show the chapter

Repeat the steps above and select [Show] in step 2.

#### Notes

- Images or sound may be momentarily interrupted at the point where you hide the chapter.
  - On other Sony DVD equipment, hidden chapters will play without being skipped.
- 

## Creating chapters manually

+RW

-RWVR

+R

You can create chapters within a title by inserting chapter marks at the desired points.

**During playback, press CHAPTER MARK where you want to divide the title into chapters.**

The following display appears at the dividing point. Title contents before and after this scene become separate chapters.



#### Hint

You can combine two chapters into one (page 67).

#### Note

If a message appears and indicates that no more chapter marks can be added, you may not be able to record or edit.

---

## Editing a Playlist

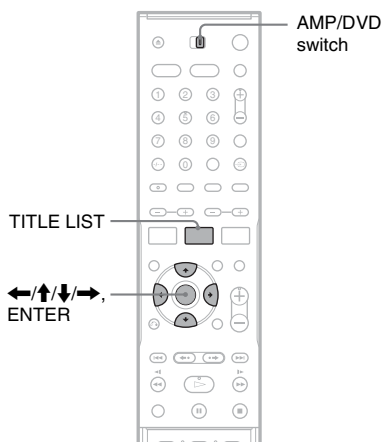
-RWVR

Playlist edit allows you to edit or re-edit without changing the actual recordings.

This section explains edit options available only for Playlist titles. Edits explained in the previous sections are also applicable if so indicated.

#### Notes

- If you edit an original title after creating a Playlist title, the results may affect the derived Playlist title.
- The picture may pause when an edited scene is played.



---

## Creating a Playlist title

**1** Set the AMP/DVD switch to DVD, and press TITLE LIST to turn on the Title List (Original).

Press TITLE LIST again if the Title List (Playlist) appears.

**2** Select a title, and press ENTER.

The sub-menu appears.

[Playlist]: Displays Playlist title names in the Title List (Playlist) menu.

[Chapter List]: Displays the Chapter List (Original) menu. When you want to add an original chapter as a Playlist title, select this and press ENTER. After the Chapter List (Original) menu appears, select the chapter and press ENTER, and then go to step 3.

**3** Select [Playlist], and press ENTER.

- 4 Select [New Playlist], and press ENTER.**  
The title or chapter is added to the Playlist as a new Playlist title.  
To create more Playlist titles, press TITLE LIST and repeat the steps above.

## Adding contents to an existing Playlist title

- 1 Set the AMP/DVD switch to DVD, and press TITLE LIST to turn on the Title List (Original).**

Press TITLE LIST again if the Title List (Playlist) appears.

- 2 Select a title, and press ENTER.**

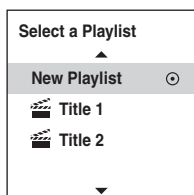
The sub-menu appears.

[Playlist]: Displays Playlist title names in the Title List (Playlist) menu.

[Chapter List]: Displays the Chapter List (Original) menu. When you want to add an original chapter to a Playlist title, select this and press ENTER. After the Chapter List (Original) menu appears, select the chapter and press ENTER, and then go to step 3.

- 3 Select [Playlist], and press ENTER.**

The disc's Playlist title names appear (if any).



- 4 Select a Playlist title name, and press ENTER.**

The contents of original title selected in step 2 are added to the Playlist title. If you want to rename the title, see page 65. You can enter up to 21 characters.

## Rearranging chapters within a Playlist title

You can move chapters in a Playlist title to create a different playback order.

- 1 Set the AMP/DVD switch to DVD, and press TITLE LIST to turn on the Title List (Playlist).**

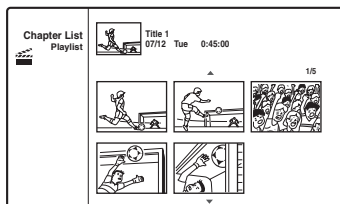
Press TITLE LIST again if the Title List (Original) appears.

- 2 Select a title, and press ENTER.**

The sub-menu appears.

- 3 Select [Chapter List], and press ENTER.**

The Chapter List menu appears with the title contents.



- 4 Select a chapter, and press ENTER.**

The sub-menu appears with options available for the selected chapter. For details, see “Editing a Title by Chapter” (page 67).

- 5 Select [Edit] and press ENTER.**

- 6 Select [Move], and press ENTER.**

- 7 Select a new location in the Chapter List, and press ENTER.**

The chapter moves to the new location.

To change the scene order more, repeat the steps above.

If you want to rename the title, see page 65.

### Note

Images or sound may be momentarily interrupted at the point where the chapters change.

# Before DV Dubbing

This section explains dubbing with a digital video camera via the DV IN jack on the front panel.

Follow the instructions in “Connecting a Digital Video Camera to the DV IN Jack,” and then move on to the section on dubbing.

If you plan to do additional editing on a disc after the initial dub, use the DV IN jack and record on a DVD-RW (VR mode).

If you want to dub by way of the LINE IN jacks, see “Recording From Connected Equipment” (page 49).

## About the DV IN jack

The DV IN jack on this recorder conforms to the i.LINK standard. You can connect any other equipment that has an i.LINK (DV) jack, and record digital signals.

i.LINK-compatible pieces of equipment can be connected by a single i.LINK cable. Possible applications are operations and data transactions with various digital AV equipment. When two or more i.LINK-compatible equipment are connected to this recorder in a daisy chain, operations and data transactions are possible with not only the equipment that this recorder is connected to but also with other devices via the directly connected equipment.

Note, however, that the method of operation sometimes varies according to the characteristics and specifications of the equipment to be connected, and that operations and data transactions are sometimes not possible on some connected equipment.

Use the Sony i.LINK 4-pin-to-4-pin cable (during DV dubbing).

i.LINK and  are trademarks.

## i.LINK baud rate

i.LINK's maximum baud rate varies according to the equipment. Three maximum baud rates are defined:

S100 (approx. 100 Mbps\*)

S200 (approx. 200 Mbps)

S400 (approx. 400 Mbps)

The baud rate is listed under “Specifications” in the instruction manual of each equipment. It is also indicated near the i.LINK jack on some equipment.

The maximum baud rate of equipment on which it is not indicated such as this unit is “S100.”

When units are connected to equipment having a different maximum baud rate, the baud rate sometimes differs from the indicated baud rate.

\* What is Mbps?

Mbps stands for megabits per second, or the amount of data that can be sent or received in one second. For example, a baud rate of 100 Mbps means that 100 megabits of data can be sent in one second.

## Note

Normally, only one piece of equipment can be connected to this recorder by the i.LINK cable (DV connecting cable). When connecting this recorder to i.LINK-compatible equipment having two or more i.LINK jacks (DV jacks), see the instruction manual of the equipment to be connected.

## Connecting a Digital Video Camera to the DV IN Jack

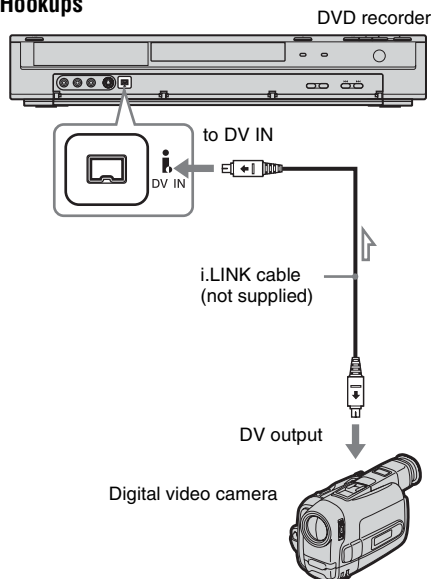
You can connect a digital video camera to the DV IN jack on the recorder to record or edit from a DV/Digital8 format tape. Operation is straightforward because the recorder will fast forward and rewind the tape for you – you do not need to operate your digital video camera. Do the following to start using the “DV Edit” functions of this recorder.

See also the instruction manual supplied with the digital video camera before connecting.

### Notes

- The DV IN jack is for input only. It will not output signals.
- You cannot use the DV IN jack when:
  - your digital video camera does not work with this recorder. Connect the camera to the LINE IN jack and follow the instructions of “Recording From Connected Equipment” (page 49).
  - the input signal is not in DVC-SD format. Do not connect a MICRO MV format digital video camera even if it has an i.LINK jack.
  - the images on the tape contain copy protection signals, which limit recording.
- If you want to play the disc on other DVD equipment, finalize the disc (page 39).

### Hookups



: Signal flow

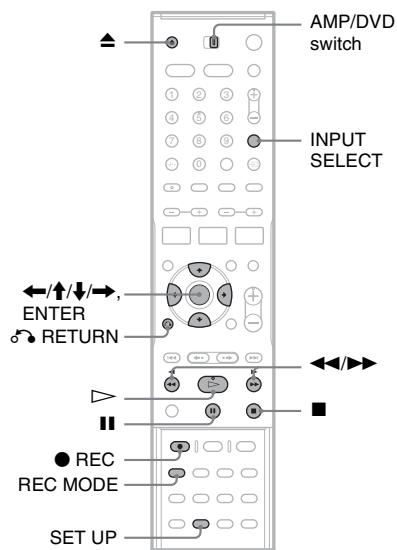
## Dubbing From a DV/Digital8 Format Tape to a DVD

**+RW** **-RWVR** **-RWVideo** **+R** **-R**

You can record a DV/Digital8 format tape onto a disc. The recorder controls the digital video camera. You can fast forward, rewind, and stop the tape to select a scene using the recorder's remote control.

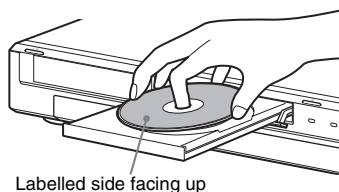
### ◆How chapters are created

The dubbed contents become one title, and the title is divided into chapters. The recorder divides the title into chapters according to the setting in [Rec Setting] Setup (5, 10, or 15-minute intervals, or does not divide at all) (page 82).



### 1 Press **▲** (open/close), and place a recordable disc on the tray.

Make sure that the disc has enough free space to record the contents of your tape.

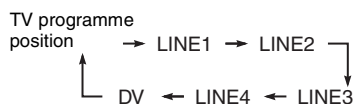


- 2 Press  $\blacktriangle$  (open/close) to close the disc tray.**  
Wait until "LOADING" disappears from the front panel display.  
For details on how to insert and format a new disc, see "Inserting and Formatting a Disc" (page 31).

- 3 Insert the source DV/Digital8 format tape into your digital video camera.**  
For the recorder to record or edit, your digital video camera must be turned on and set to video playback mode.

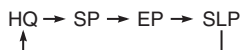
- 4 Press INPUT SELECT on the remote repeatedly to select "DV."**

The selected input changes as follows:



- 5 Press REC MODE on the remote repeatedly to select the recording mode.**

The recording mode changes as follows:



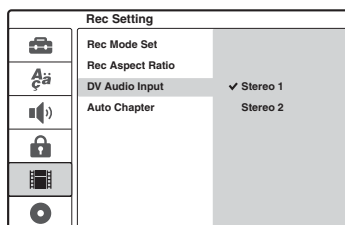
For details about the recording modes, see page 41.

- 6 Set the AMP/DVD switch to DVD, and press SET UP on the remote.**

The Setup Display appears.

- 7 Select  $\blacksquare$  [Rec Setting], and press  $\rightarrow$ .**

- 8 Select [DV Audio Input], and press  $\rightarrow$ .**



[Stereo 1] (default): Records original sound only. Normally select this when dubbing a DV format tape.

[Stereo 2]: Records additional sound only. Select this only if you have added a second audio channel when recording with your digital video camera.

- 9 Select an option, and press ENTER.**

- 10 Press  $\hookrightarrow$  RETURN to turn off the Setup Display.**

- 11 Press  $\triangleright$  to start playing the DV/Digital8 format tape.**

The playback picture appears on the screen.

- 12 While watching the screen, search for the point you want to start recording by pressing  $\blacktriangleleft/\blacktriangleright$ .**

- 13 When you find the point you want, press  $\text{II}$ .**

- 14 Press  $\bullet$  REC.**

Playback starts from the selected point, and the recorder starts recording.

## To stop recording

Press  $\blacksquare$ . Note that it may take a few seconds for the recorder to stop recording.

## Notes

- If you want to play the disc on other DVD equipment, finalize the disc (page 39).
- You cannot connect more than one piece of digital video equipment to the recorder.
- You cannot control the recorder using another device or another recorder of the same model.
- You cannot record date, time, or the contents of the cassette memory onto the disc.
- When dubbing from a DV/Digital8 format tape by way of the DV IN jack, the recorder starts recording about five seconds after the tape starts playing.
- If you dub a DV/Digital8 format tape that has been edited on a PC using the DV IN jack, any audio recorded on the Stereo 2 track may only be recorded as noise.
- If you record from a DV/Digital8 format tape with a sound track that is recorded in multiple sampling frequencies (48 kHz, 44.1 kHz, or 32 kHz), no sound or an unnatural sound will be output when playing back the sampling frequency switch point on the disc.
- The recorded picture may be momentarily affected if the picture size of the source image changes, or if there is nothing recorded on the tape.
- When dubbing from the DV IN jack, pictures are recorded only in 4:3 size regardless of the [Rec Aspect Ratio] setting in [Rec Setting] Setup (page 82). You can select the picture size for DVD-RWs (VR mode) only.
- Noise may occur when you switch the audio sampling mode (e.g. 48 kHz/16 bits  $\rightarrow$  32 kHz/12 bits).
- The video or sound may drop out during the recording of start/stop points on the tape.



- If there is a blank space for one second or more on the tape, DV dubbing ends automatically.

## DVD Recorder Set-Up Menu

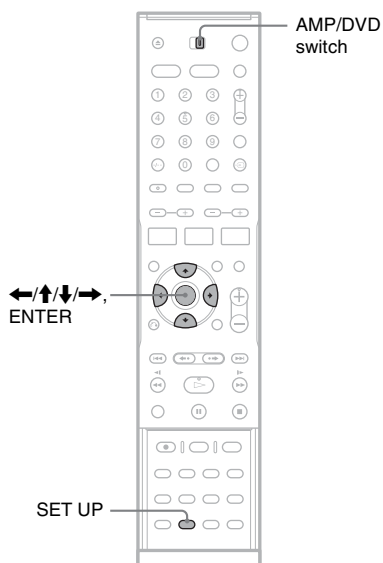
# Using the Setup Displays

By using the Setup Displays, you can make various adjustments to items such as picture and sound, as well as select a language for the subtitles.

The Setup Display consists of several levels to set up options. To select the next level, press **→**. To select a previous level, press **←**.

### Note

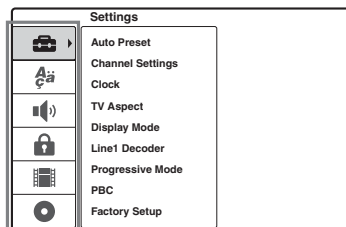
Playback settings stored in the disc take priority over the Setup Display settings, and not all of the functions described may work.



**1** Set the AMP/DVD switch to DVD.

**2** Press **SET UP** while the recorder is in stop mode.

The Setup Display appears.

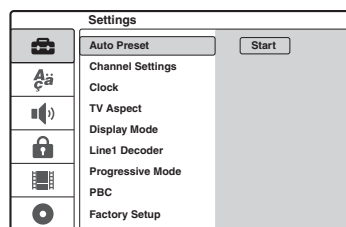


Setup options:

[Settings], [Language], [Audio], [Parental Control], [Rec Setting], [Disc Info]

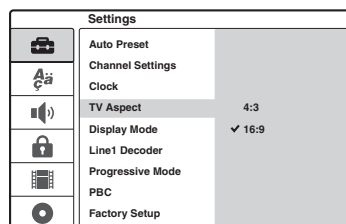
For details about [Disc Info] Setup, see "DVD Recorder Basics" (page 31).

**3** Press **↑/↓** to select the option you want to set up, and press **→**.

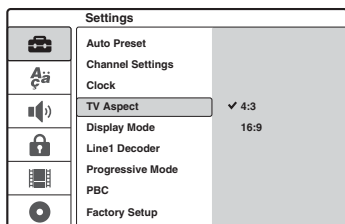


**4** Press **↑/↓** to select the item you want to set up, and press **→**.

Available options for the item appear.  
Example: [TV Aspect]



- 5** Press **↑/↓** to select the item you want to set up, and press **ENTER** to conform.  
Some items require additional settings.

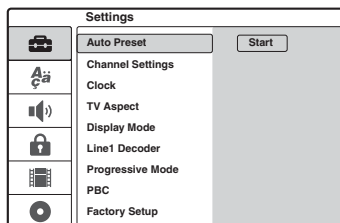


**To turn off the Setup Display**  
Press **SET UP**.

## Channel and Clock Settings

The [Settings] Setup helps you to make tuner, clock, and channel settings for the recorder.

Select [Settings] in the Setup Display. To use the display, see “Using the Setup Displays” (page 74).



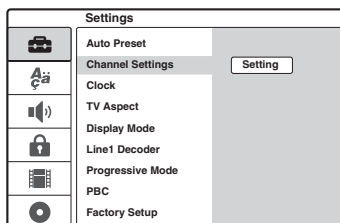
### [Auto Preset]

Presets all receivable channels automatically. Select your country. Then select [Start] and press **ENTER**.

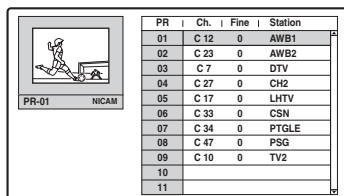
### [Channel Settings]

Presets channels manually. If some channels could not be set using the Auto Preset function, you can set them manually. If there is no sound or if the picture is distorted, the wrong tuner system may have been preset during [Auto Preset]. Set the correct tuner system manually in the steps below.

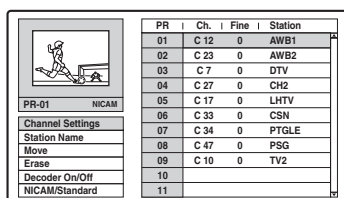
- 1 Set the AMP/DVD switch to DVD, select [Channel Settings] and press **➡**.



- 2 Press ENTER while [Setting] is selected. The Channel List menu appears.



- 3 Press  $\uparrow/\downarrow$  to select the programme position you want to set, and press ENTER.



- 4 Select an option from the sub-menu, and press ENTER.

[Channel Settings]: Sets the channel manually. See “To set the channels manually” below.

[Station Name]: Changes the station name. The display for entering characters appears. To enter characters, see page 37.

[Move]: Sorts the programme positions on the Channel List. Press  $\uparrow/\downarrow$  to move the selected programme position to a new location.

[Erase]: Disables a programme position you do not need.

[Decoder On/Off]: Sets the channels for the decoder. You need this setting to watch or record PAY-TV/Canal Plus programmes. Press ENTER so [Decoder] appears on the display. Press ENTER again to turn off the setting.

[NICAM/Standard]: Sets the channels for the NICAM broadcast. Normally, [NICAM] is lit on the display. If the sound from NICAM broadcast is not clear, press ENTER so [NICAM] disappears.

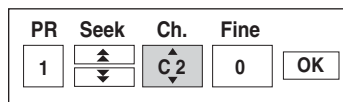
### Note

Be sure to correctly select the programme position you want to disable. If you disable the wrong programme position by mistake, you need to reset that channel manually.

### ◆To set the channels manually

When you select [Channel Settings] in step 4 above, the display for setting channels appears.

- 1 Press  $\leftarrow/\rightarrow$  to select the item and press  $\uparrow/\downarrow$  to change the setting.  
[PR] indicates the selected programme position.



[Seek]: Searches for a channel automatically. Searching stops when the recorder tunes in a channel.

[Ch.]: Changes the channel number.

[Fine]: Fine tunes the channel to obtain a clearer picture.

- 2 Select [OK] and press ENTER.  
The setting is stored and the display returns to the Channel List.  
To preset other channels, follow from step 3 of the Channel List setting (page 75).

### ◆Receivable channels

TV system	Channel coverage
BG (West European Countries, except those listed below) Colour system: PAL	E2 - E12 VHF
	Italia A - H VHF
	E21 - E69 UHF
	S1 - S20 CATV
	S21 - S41 HYPER
DK (East European Countries) Colour system: PAL	S01 - S05 CATV
	R1 - R12 VHF
	R21 - R69 UHF
	S1 - S20 CATV
	S21 - S41 HYPER
I (Great Britain/Ireland) Colour system: PAL	S01 - S05 CATV
	Ireland A - J VHF
	South Africa 4 - 13 VHF
	B21 - B69 UHF
	S1 - S20 CATV
	S21 - S41 HYPER
	S01 - S05 CATV

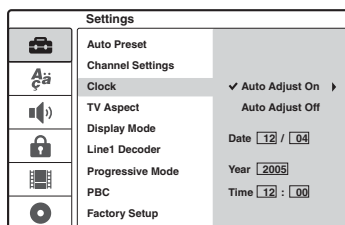
TV system	Channel coverage
L (France) Colour system: SECAM	F2 – F10 VHF
	F21 – F69 UHF
	B – Q CATV
	S21 – S41 HYPER

## [Clock]

### ◆[Auto Adjust]

Turns on the Auto Clock Set function when a channel in your local area broadcasts a time signal.

- 1 Select [Clock] and press ➡.



- 2 Select [Auto Adjust On] and press ENTER.

### 💡 Hint

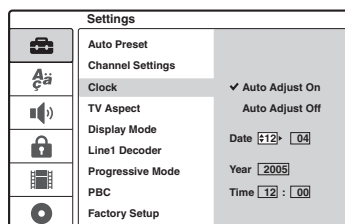
If you select [Auto Adjust On], the Auto Clock Set function is activated whenever the recorder is turned off.

### ◆To set the clock manually

If the Auto Clock Set function did not set the clock correctly for your local area, set the clock manually.

- 1 Select [Clock] and press ➡.

- 2 Press ➡.



- 3 Press ↑/↓ to set the day, and press ➡. Set the month, year, hour, and minutes in sequence. Press ←/➡ to select the item to be set, then press ↑/↓ to set the numbers.

To change the numbers, press ← to return to the item to be changed, and press ↑/↓.

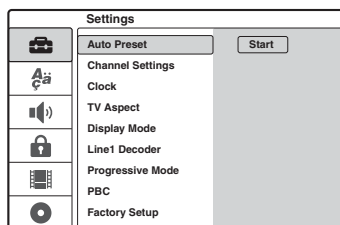
- 4 Press ENTER to start the clock.

## TV and Video Settings

These settings will adjust items related to the image, such as size.

Choose the settings according to the type of TV, tuner, or decoder connected to the recorder.

Select [Settings] in the Setup Display. To use the display, see “Using the Setup Displays” (page 74). The default settings are underlined.



## [TV Aspect]

Selects the aspect ratio of the connected TV (4:3 standard or wide).

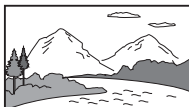
[ 4:3 ]	Select this when connecting to a 4:3 screen TV. When you select [4:3], set [Display Mode] below.
[ <u>16:9</u> ]	Select this when connecting to a wide-screen TV or TV with a wide mode function.

## [Display Mode]

Selects how to display a wide picture on the screen when [4:3] is selected in [TV Aspect].

[ <u>Letter Box</u> ]	Displays a wide picture with bands on the upper and lower portions of the screen.
[ <u>Pan Scan</u> ]	Automatically displays a wide picture on the entire screen and cuts off the portions that do not fit.

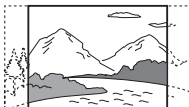
[16:9]



[4:3 Letter Box]



[4:3 Pan Scan]



### Note

Depending on the disc, [Letter Box] may be selected automatically instead of [Pan Scan] or vice versa.

### [Line1 Decoder]

Sets the LINE 1-TV jack for inputting encoded video signals.

[ <u>Off</u> ]	Inputs the signals from the LINE 1-TV jack. Normally select this.
[ On ]	The signal input from the LINE 1-TV jack is output to the LINE 3/ DECODER jack for decoding. The decoded signal is then input back through the LINE 3/ DECODER jack so you can record or view PAY-TV/Canal Plus programmes. In this case, select "LINE 1" by pressing INPUT SELECT.

### [Progressive Mode] (Viewing in Progressive format)

Selects whether the COMPONENT VIDEO OUT jacks output progressive signals.

[ <u>Off</u> ]	Select this when your TV is not compatible with progressive signals, or, the TV is connected to jacks other than the COMPONENT VIDEO OUT jacks.
[ On ]	Select this when your TV accepts progressive 625p format signals, and, the TV is connected to the COMPONENT VIDEO OUT jacks. You will enjoy accurate colour reproduction and high quality image.

### Notes

- You cannot select [On] if the VIDEO OUT SELECT switch on the rear panel is set to "RGB." Make sure that it is set to "COMPONENT" (page 21).
- When set to [On], pictures appear on a progressive compatible TV or monitor. Signals are only sent to the COMPONENT VIDEO OUT jacks in progressive mode. To cancel the setting, remove the disc and close the disc tray. Then press and hold ■ (stop) on the recorder for five seconds.
- If your TV does not accept progressive signals, [Progressive Mode] will be set to [Off] automatically after a few seconds.


### [PBC] (Playback Control)

Turns the PBC function on or off when playing VIDEO CDs.

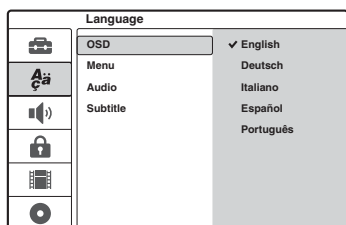
[ Off ]	The PBC function is not activated. VIDEO CDs with PBC will be played the same way as audio CDs.
[ <u>On</u> ]	The PBC function is activated when playing VIDEO CDs with PBC.

## Language Settings

The [Language] Setup allows you to select a language for the recorder's display and discs.

Select  [Language] in the Setup Display. To use the display, see "Using the Setup Displays" (page 74).

The default settings are underlined.



### [OSD] (On-Screen Display)

Switches the display language on the screen.

### [Menu] (DVD VIDEO only)

Switches the language for the DVD menu.

### [Audio] (DVD VIDEO only)

Switches the language of the sound track.

### [Subtitle] (DVD VIDEO only)

Switches the language of the subtitles recorded on the disc.

[ <u>Original</u> ]	Selects the language given priority in the disc.
---------------------	--


[ <u>Other</u> ]	The display for entering a language code appears. Press the number buttons to enter a four-digit code number from "Language Code List" (page 116) and press ENTER.
------------------	--

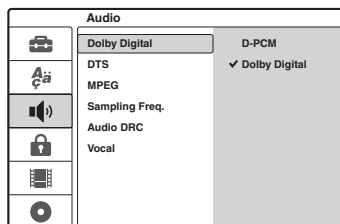
### Note

If you select a language in [Menu], [Subtitle], or [Audio] that is not recorded on the DVD VIDEO, one of the recorded languages will be automatically selected.

## Audio Settings

The [Audio] Setup allows you to adjust the sound according to the playback and connection conditions.

Select  [Audio] in the Setup Display. To use the display, see "Using the Setup Displays" (page 74). Underlined below are the default settings optimized for the best surround effect with the supplied speaker system.



### [Dolby Digital] (DVDs only)

Selects the type of Dolby Digital signal when using the DIGITAL OUT (OPTICAL or COAXIAL) jack.

[ <u>D-PCM</u> ]	Select this when the recorder is connected to an audio component without a built-in Dolby Digital decoder.
------------------	--

[ <u>Dolby Digital</u> ]	Select this when the recorder is connected to the speaker system.
--------------------------	---

### Note

If [D-PCM] is selected, surround effect will be lost in some Sound Field settings.

### [DTS] (DVD VIDEO only)

Selects whether or not to output DTS signals when using the DIGITAL OUT (OPTICAL or COAXIAL) jack.

[ <u>Off</u> ]	Select this when the recorder is connected to an audio component without a built-in DTS decoder.
----------------	--

[ <u>On</u> ]	Select this when the recorder is connected to the speaker system.
---------------	---

## Note

If [Off] is selected, no sound will be heard from the supplied speakers when playing a DTS soundtrack on a DVD.

## [MPEG] (DVD VIDEO only)

Selects the type of MPEG audio signal when using the DIGITAL OUT (OPTICAL or COAXIAL) jack.

[ PCM ]	Select this when the recorder is connected to the speaker system. If you play MPEG audio sound tracks, the recorder outputs stereo signals via the DIGITAL OUT (OPTICAL or COAXIAL) jack.
[ Bitstream ]	Select this when the recorder is connected to an audio component with a built-in MPEG decoder.

## Note

The supplied speaker system does not accept MPEG audio signals. If [Bitstream] is selected, no sound will be output from the speakers.

## [Sampling Freq.] (DVD VIDEO only)

Selects the sampling frequency of the audio signal.

[ 48kHz ]	The audio signals of DVD VIDEOS are always converted to 48 kHz/16 bit.
[ 96kHz ]	All types of signals, including 96 kHz/24 bit, are output in their original format.

## Note

If [96kHz] is selected, surround effect will be lost in some Sound Field settings.

## [Audio DRC] (Dynamic Range Control) (Dolby Digital DVDs only)

Makes the sound clear when the volume is turned down when playing a DVD that conforms to [Audio DRC]. This affects the output from the following jacks:

- LINE 2 OUT (AUDIO L/R) jacks
- LINE 1-TV jack
- LINE 3/DECODER jack

- DIGITAL OUT (OPTICAL or COAXIAL) jack only when [Dolby Digital] is set to [D-PCM] (page 79).

[ Off ]	Normally select this.
[ On ]	Makes low sounds clear even if you turn the volume down.

## Note

For the output from the speaker system, use the “AUDIO DRC” setting under “CUSTOMIZE” in the AMP menu (page 87).

## About the Audio DRC function

The Audio DRC function works differently depending on the audio settings.

RECORDER [Audio] Setup:		SPEAKER AMP menu:	Audio DRC effect:
[Dolby Digital]	[Audio DRC]	“AUDIO DRC”	
[D-PCM] <sup>*3</sup>	[Off]	“DRC OFF”	No
		“DRC MAX” or “DRC STD”	No
	[On]	“DRC OFF”	Yes <sup>*1</sup>
		“DRC MAX” or “DRC STD”	Yes <sup>*1</sup>
[Dolby Digital] <sup>*4</sup>	[Off]	“DRC OFF”	No
		“DRC MAX” or “DRC STD”	Yes <sup>*2</sup>
	[On]	“DRC OFF”	No
		“DRC MAX” or “DRC STD”	Yes <sup>*2</sup>

<sup>\*1</sup> Dolby Digital DVD only. Works for both analogue and digital outputs.

<sup>\*2</sup> Dolby Digital DVD only. Speaker sound output only.

<sup>\*3</sup> Two channels.

<sup>\*4</sup> Multi channels.




### [Vocal] (Karaoke DVD only)

Mixes karaoke channels into normal stereo. This function is effective for multi-channel karaoke DVDs only.

[ Off ]	Does not mix karaoke channels into normal stereo. You can turn off the guide vocal on a multi-channel DVD.
[ On ]	Mixes karaoke channels into normal stereo.

## Parental Control Settings

Playback of some DVD VIDEOS can be limited according to a predetermined level, such as the age of the users. Scenes may be blocked or replaced with different scenes.

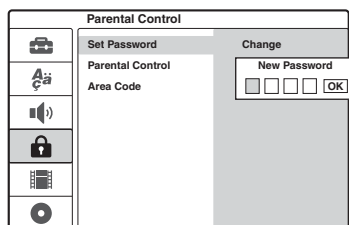
Select  [Parental Control] in the Setup Display. To use the display, see “Using the Setup Displays” (page 74).

### [Set Password]

Sets or changes the password for [Parental Control].

- 1 Set the AMP/DVD switch to DVD, select [Set Password], and press ➡.

If you have not entered a password, the display for entering a new password appears.



Enter a four-digit password using the number buttons and press ENTER. Enter the password again to confirm, and press ENTER while [OK] is selected.

The password is stored.

- If you make a mistake, press ← repeatedly to delete numbers one by one, then re-enter it.
- 2 To change the password, press ENTER while [Change] is selected.  
[Erase]: Erases the password. Enter the registered password and press ENTER.
  - 3 Enter the registered password and press ENTER.
  - 4 Enter a new four-digit password and press ENTER.
  - 5 Enter the password again to confirm and press ENTER.

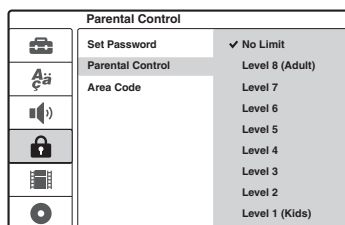
## Hint

If you forget your password, clear the password and registered a new password.  
Press SET UP to turn on the Setup Display. Enter the six-digit number 210499 using the number buttons. Select [OK] and press ENTER. The registered password is cleared.

## [Parental Control]

Selects the limitation level.

- 1 Set the AMP/DVD switch to DVD, select [Parental Control], and press ➡.



The display asks for the password.

- 2 Enter the four-digit password using the number buttons and press ENTER.
- 3 Select the level and press ENTER.  
The lower the level, the stricter the limitation.  
If you select [No Limit], the Parental Control function does not activate.

## [Area Code]

Selects a code for a geographic area as the playback limitation level. See “Area Code List” (page 117).

- 1 Set the AMP/DVD switch to DVD, select [Area Code], and press ➡.
- 2 Enter the four-digit password using the number buttons and press ENTER.
- 3 Press ↑/↓ to enter the first character of the area and press ➡.
- 4 Press ↑/↓ to enter the second character and press ENTER.

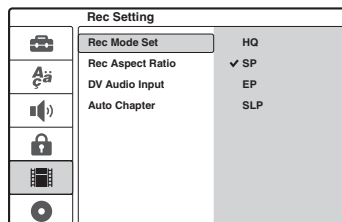
## Notes

- When you play discs which do not have the Parental Control function, playback cannot be limited on this recorder.
- Depending on the disc, you may be asked to change the Parental Control level while playing the disc. In this case, enter your password, then change the level.

# Recording Settings

The [Rec Setting] Setup allows you to adjust the recording picture quality and size.

Select [Rec Setting] in the Setup Display. To use the display, see “Using the Setup Displays” (page 74). The default settings are underlined.



## [Rec Mode Set]

Selects one of the following recording modes: HQ (High Quality), SP (Standard Play), EP (Extended Play), SLP (Super Long Play).

## [Rec Aspect Ratio] (DVD-RW (VR mode) only)

Selects the picture size of the programme to be recorded.

When recording on discs other than DVD-RWs (VR mode), the screen size is fixed to 4:3.

[ <u>4:3</u> ]	Sets the picture size to 4:3.
[ 16:9 ]	Sets the picture size to 16:9 (wide mode).

## [DV Audio Input]

Selects the stereo track when recording from a digital video camera connected to the DV IN jack on the front panel.

[ <u>Stereo 1</u> ]	Records original sound at the time of shooting. Normally select this when dubbing a DV/Digital8 format tape.
[ Stereo 2 ]	Records only additional sound over-dubbed after shooting.

## [Auto Chapter]

Automatically divides a recording (a title) into chapters by inserting chapter markings at a specified interval. The markings are inserted while the recording is being made.

[ Off ]	No chapter mark is inserted.
---------	------------------------------

[ <u>5Min</u> ]	Sets the interval to 5 minutes.
[ 10Min ]	Sets the interval to 10 minutes.
[ 15Min ]	Sets the interval to 15 minutes.

**Note**

Depending on the size of the recording being made, the actual interval may vary from the interval selected in [Auto Chapter]. The selected interval should only be used as an approximation to create chapters.

## Speaker Surround Options

# Checking the Status Information on the Centre Unit Display

You can set up the speaker system while checking the status information on the centre unit display.

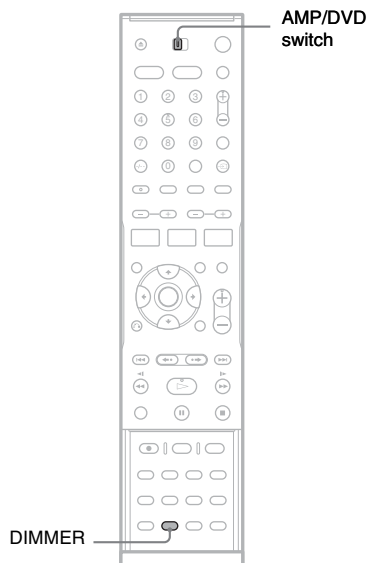
Centre unit display



The following information appears.

“DIGITAL” (Dolby Digital), “dts” (DTS)	Indicates the current audio signal format.
“PL” (Dolby Pro Logic), “PLII” (Dolby Pro LogicII), “DCS”	Indicates the current surround format (page 85).
“LINK”	Lights up when a 2 channel source is output from the surround speakers (page 86).
“DSGX”	Lights up when DSGX is activated (page 87).
“A/V SYNC”	Lights up when A/V SYNC is activated (page 88).
“L,” “C,” “R,” “SL,” “SW,” “SR”	Lights up to indicate the speaker you are adjusting.

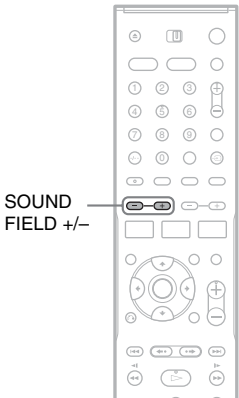
To turn down the brightness of the centre unit display (DIMMER)



Set the AMP/DVD switch to AMP, and press DIMMER. The centre unit display darkens (“ON”) and brightens (“OFF”) with each press.

# Selecting the Sound Field

You can take advantage of surround sound simply by selecting one of system's preprogrammed sound fields, which bring the exciting and powerful sound of movie theatres into your home.



Press **SOUND FIELD +/-** to select one of the sound fields.

Example:



The centre unit display changes as follows. For details, see the pages in parentheses.

Sound field	
"A. F. D. AUTO"	Outputs the originally recorded sound with no sound effects (page 85).
"PRO LOGIC," "PLII MOVIE," "PLII MUSIC"	Outputs 2 channel sources like CDs as 5.1 channel. Dolby Pro Logic produces five channels from 2 channel sources (page 85).
"C. ST. EX A," "C. ST. EX B," "C. ST. EX C"	Produces an ideal movie theatre sound environment using DCS (Digital Cinema Sound) technology (page 86).

Sound field	
"MULTI ST.," "REAR ST."	Outputs 2 channel sources from the front and surround speakers, or surround speakers only (page 86).
"HALL," "JAZZ CLUB," "L. CONCERT" (live concert), "GAME," "SPORTS," "MONO MOVIE"	Provides sound to suit the source (movies, music, news, sports, or others)
"NIGHT"	You can enjoy sound effects or dialogue, as you would in a movie theatre, even at low volume. Useful for watching movies at night.
"2CH STEREO"	Outputs sound only from the front left and right speakers and subwoofer. No surround effects (page 85).

**"A. F. D. AUTO" (Auto Format Direct Auto)**  
Presents the sound as it was recorded/encoded, without adding any effects (e.g. reverberation). The auto decoding function automatically detects the type of audio signal being input (Dolby Digital, DTS, or standard 2 channel stereo) and performs the proper decoding as necessary. If there are no low frequency signals (Dolby Digital LFE, etc.), it will generate a low frequency signal for output to the subwoofer.

**"2CH STEREO" (2 Channel Stereo)**  
Outputs the sound from the front left and right speakers and subwoofer. Standard 2 channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to 2 channels.

**"PRO LOGIC" (Dolby Pro Logic)**  
Produces five output channels from 2 channel sources. This mode performs Pro Logic decoding to the input signal and output to front, centre, and surround speakers. Meanwhile, the surround channel becomes monaural.

## **“PLII MOVIE/PLII MUSIC” (Dolby Pro Logic II Movie/Music)**

Produces five full-bandwidth output channels from 2 channel sources. This is done using an advanced, high-purity matrix surround decoder that extracts the spatial properties of the original recording without adding any new sounds or tonal colorations.

### **Hints**

- If you do not want any surround effect, select “A.F.D. AUTO” or “2CH STEREO.”
- The system remembers the last sound field selected for each function. (i.e., if you listen to DVDs with “HALL” and then FM/AM radio with another sound field, the system remembers and applies “HALL” when you return to the DVD function.)

### **Note**

When the input signal is a multi channel source, Dolby Pro Logic and Dolby Pro Logic II Movie/Music are cancelled and the multi channel source is output directly.

## **Outputting 2 channel sources from the centre and surround speakers**

### **“MULTI ST.” (Multi Stereo)**

Outputs 2 channel sources from the front speakers, surround speakers, and centre speaker simultaneously. Front and surround speakers output the same sound.

### **“REAR ST.” (Rear Stereo)**

Outputs 2 channel sources from the surround speakers only. The front speakers output sound only if you select “NONE” in “SURR SP” in the AMP menu (page 92).

### **Hint**

When you select “MULTI ST.” or “REAR ST.,” “LINK” appears in the centre unit display.

## **Enjoying Digital Cinema Sound (DCS)**

In collaboration with Sony Pictures Entertainment, Sony measured the sound environment of their studios and integrated the data of the measurement and Sony’s own DSP (Digital Signal Processor) technology to develop “Digital Cinema Sound.” “Digital Cinema Sound” simulates in a home theatre an ideal movie theatre sound environment based on the preference of the movie director.

### **“C. ST. EX A” (Cinema Studio EX A)**

Reproduces the sound of the Sony Pictures Entertainment “Cary Grant Theater” cinema production studio. This is a standard mode, great for watching most any type of movie.

### **“C. ST. EX B” (Cinema Studio EX B)**

Reproduces the sound of the Sony Pictures Entertainment “Kim Novak Theater” cinema production studio. This mode is ideal for watching science-fiction or action movies with lots of sound effects.

### **“C. ST. EX C” (Cinema Studio EX C)**

Reproduces the sound of the Sony Pictures Entertainment scoring stage. This mode is ideal for watching musicals or classic films where music is featured in the soundtrack.

## **About Cinema Studio EX**

Cinema Studio EX is ideal for enjoying the movie software encoded in multi channel format, such as the Dolby Digital DVD. This mode reproduces the sound of Sony Pictures Entertainment’s studios. Cinema Studio EX consists of the following three elements.

- Virtual Multi Dimension

Creates five sets of virtual speakers surrounding the listener from a single pair of actual surround speakers.

- Screen Depth Matching

In a movie theatre, sound seems to come from inside the movie screen. This element creates the same sensation in your listening room by shifting the sound of the front speakers “into” the screen.

- Cinema Studio Reverberation

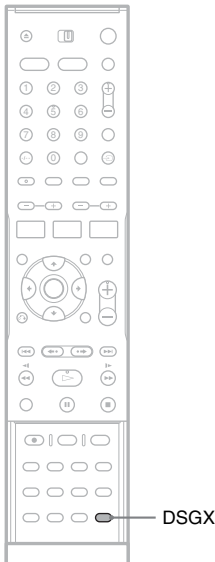
Reproduces reverberation peculiar to a movie theatre. Cinema Studio EX is an integrated mode which operates these elements simultaneously.

### **Notes**

- The virtual speaker effect may cause increased noise in the playback signal.
- When listening with sound fields that employ virtual speakers, you will not be able to hear any sound coming directly from the surround speakers.

# Reinforcing Bass Frequencies (DSGX)

The DSGX (Extended Dynamic Sound Generator) function reinforces bass frequencies.



## Press DSGX.

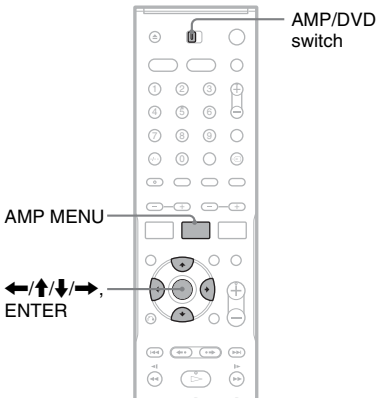
The DSGX function is activated, and the “DSGX” indicator lights up in the centre unit display. To cancel the function, press DSGX again.

# Enjoying the Sound at Low Volume (“AUDIO DRC”)

The AUDIO DRC (Dynamic Range Compression) function narrows the dynamic range of the sound track. Useful for watching movies at low volume late at night.

## Notes

- The AUDIO DRC function applies only to Dolby Digital sources.
- This setting is for speaker system output only. If you want to use the AUDIO DRC function for a recorder output other than for this speaker system, set [Audio DRC] in [Audio] Setup to [On] (page 80).

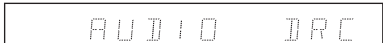


## 1 Set the AMP/DVD switch to AMP, and press AMP MENU.

The AMP menu appears on the centre unit display.

## 2 Press ↑/↓ to select “CUSTOMIZE,” and press ENTER or →.

Example:



## 3 Press ↑/↓ to select “AUDIO DRC,” and press ENTER or →.

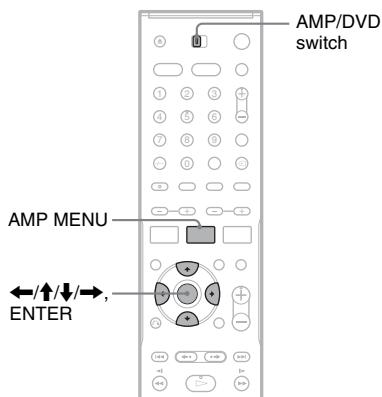


- 4 Press ↑/↓ to select a setting.**  
 “DRC STD”: Reproduces the soundtrack with the dynamic range that the recording engineer intended.  
 “DRC MAX”: Maximum compression of dynamic range.  
 “DRC OFF” (default): No compression of dynamic range.

- 5 Press ENTER or AMP MENU to turn off the menu.**

## Adjusting the Delay Between the Picture and Sound (“A/V SYNC”)

If picture and sound do not match, you can adjust the delay between them.



- 1 Set the AMP/DVD switch to AMP, and press AMP MENU.**

The AMP menu appears on the centre unit display.

- 2 Press ↑/↓ to select “CUSTOMIZE,” and press ENTER or →.**

- 3 Press ↑/↓ to select “A/V SYNC,” and press ENTER or →.**

SYNC OFF

“SYNC OFF” (default): Does not adjust.  
 “SYNC ON”: Adjusts the delay between picture and sound.

- 4 Press ↑/↓ to select “SYNC ON.”**

The A/V SYNC function is activated, and the “A/V SYNC” indicator lights up in the centre unit display.

- 5 Press ENTER or AMP MENU to turn off the menu.**

To cancel the setting, repeat the above steps and select “SYNC OFF” in step 4.

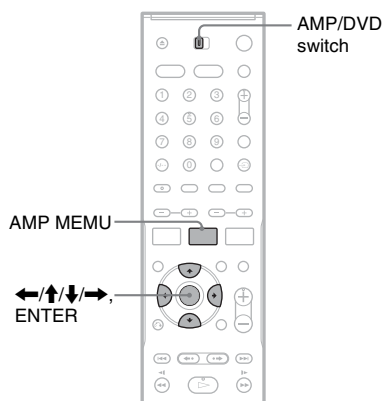


## Note

This function may not work depending on the input stream, or the selected input source and the Sound Field setting. When active, “A/V SYNC” lights up on the centre unit display.

## Enjoying Stereo or Bilingual Broadcasts (“DUAL MONO”)

This recorder receives bilingual NICAM or ZWEITON broadcasts. You can switch between audio channels during reception or recording, or during playback of DVD-RWs. Select the channel and speaker output, as below.



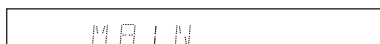
- 1 Set the AMP/DVD switch to AMP, and press AMP MENU.

The AMP menu appears.

- 2 Press  $\uparrow/\downarrow$  to select “CUSTOMIZE,” and press ENTER or  $\rightarrow$ .

- 3 Press  $\uparrow/\downarrow$  to select “DUAL MONO,” and press ENTER or  $\rightarrow$ .

Example:



- 4 Press  $\uparrow/\downarrow$  to select a setting.

“MAIN” (default): Main sound is output from the centre speaker.

“SUB”: Sub sound is output from the centre speaker.

“MAIN+SUB”: Main and sub sound are output from the centre speaker.

“MAIN/SUB”: Main sound is output from the front left speaker; sub sound from the front right speaker.

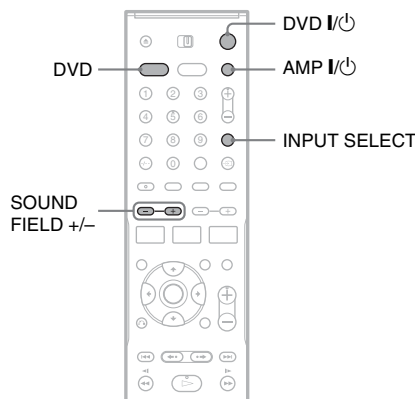
- 5 Press ENTER or AMP MENU to turn off the AMP menu.

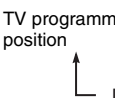
### Note

If “CENTER SP” is set to “CENTER NO” in the AMP menu (page 92), sound is output from the front left and right speakers.

## Enjoying TV or VCR Sound From the Speaker System

You can enjoy the sound from connected equipment through the speakers of this system. Be sure to connect your TV or other equipment correctly.



- 1 Press DVD I/⏮ to turn on the recorder.**  
When watching TV, set the TV to video input.
- 2 Press AMP I/⏮ to turn on the speaker system.**  
If “FM” or “AM” appears on the centre unit display, press DVD on the remote to display “DVD.”
- 3 Press INPUT SELECT repeatedly to select an input source according to the connection you made.**  
The front panel display of the recorder changes as follows:  


```
graph TD; A[TV programme position] --> B[LINE1]; B --> C[LINE2]; C --> D[LINE3]; D --> E[LINE4]; E --> F[DV]; F --> A;
```
- 4 Press SOUND FIELD +/- to select the sound field you want.**

**Note**

When you listen to the TV sound or stereo sound of a 2 channel source from the six speakers, select “PRO LOGIC” or “PLII MUSIC/MOVIE.”

## Speaker System Set-Up Menu

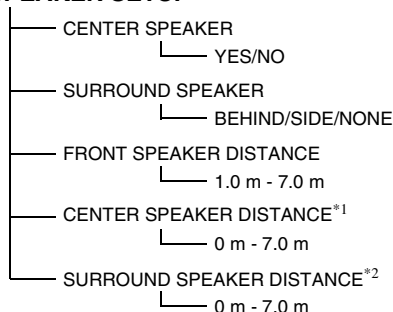
### Using the AMP Menu

#### ◆AMP menu tree

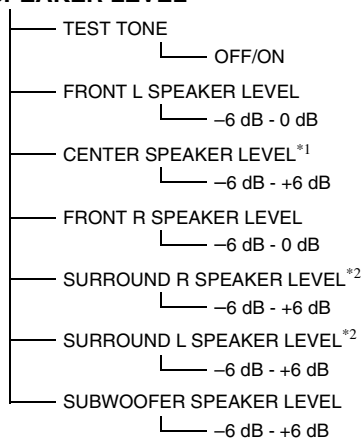
Actual displays are abbreviated.

1st Layer      2nd Layer      3rd Layer

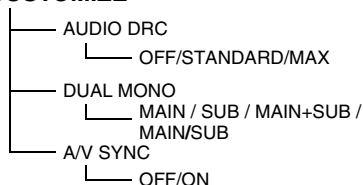
#### SPEAKER SETUP



#### SPEAKER LEVEL



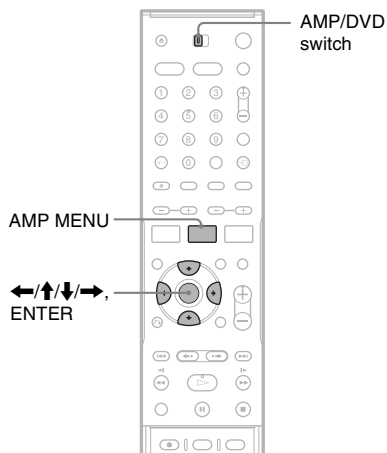
#### CUSTOMIZE



\*<sup>1</sup> Setting item does not appear if "CENTER SPEAKER" setting is "NO."

\*<sup>2</sup> Setting item does not appear if "SURROUND SPEAKER" setting is "NONE."

By using the AMP menu on the centre unit display, you can set up the speaker system for the optimum surround sound. For details about the surround options of this speaker system, see page 85.



- 1** Pointing the remote at the centre unit, set the AMP/DVD switch to AMP and press **AMP MENU**.

An AMP menu option appears in the centre unit display.

Example:



- 2** Press **↑/↓** to select an option.

"SP SETUP" (speaker setup): Allows you to enter the speaker positions etc. (page 92).

"LEVEL" (level): Turns the test tone on or off, and sets the speaker level (page 93).

"CUSTOMIZE" (customize): Sets other sound functions for the speaker system (page 95).

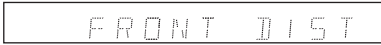
- 3** Press **ENTER** or **→**.

An item in the second layer appears.

Example: "CENTER SP" (centre speaker)



- 4** Press **↑/↓** to select the item you want to set.  
Example: “FRONT DIST” (front speaker distance)



- 5** Press **ENTER** or **→**.



- 6** Press **↑/↓** to select a setting.  
The setting is applied to the speaker system.

**To return to the previous layer**  
Press **←**.

**To turn off the AMP menu**  
Press AMP MENU again.

## Basic Speaker Settings (“SP SETUP”)

You can input the speaker positions and select whether or not to engage any centre or surround speakers.

Select “SP SETUP” in the AMP menu. To use the AMP menu, see “Using the AMP Menu” (page 91). For details about setting speaker distance, see also “5. Basic speaker setup” (page 29).

The default settings are underlined.

### Notes

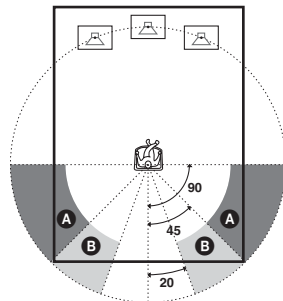
- The settings below may not be the defaults if you followed “Step 8: Initial Setup” (page 28) to reflect the current speaker placement.
- Change your current settings again should you change the speaker positions.

### “CENTER SP” (centre speaker)

“ <u>CENTER YES</u> ”	Normally select this.
“CENTER NO”	Select this if no centre speaker is used.

### “SURR SP” (surround speaker)

“ <u>BEHIND</u> ”	Select this if surround speakers are located in <b>B</b> .
“SIDE”	Select this if surround speakers are located in <b>A</b> .
“NONE”	Select this if no surround speaker is used.



**“FRONT DIST” (front speaker distance)**

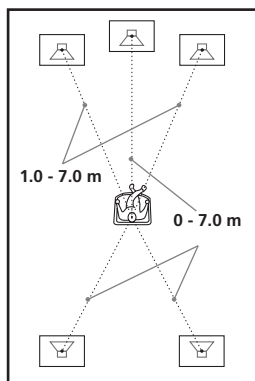
Set the front speaker distance from your listening position between 1.0 to 7.0 m in 0.2 m increments. The default setting is “3.0.”

**“CEN DIST” (centre speaker distance)**

Set the centre speaker distance between the “FRONT DIST” setting and -1.6 m of the “FRONT DIST” setting (set in 0.2 m increments). The default setting is “3.0.”

**“SURR DIST” (surround speaker distance)**

Set the surround speaker distance between the “FRONT DIST” setting and -4.6 m of the “FRONT DIST” setting (set in 0.2 m increments). The default setting is “3.0.”

**Notes**

- When you select an item, the sound momentarily cuts off.
- Depending on the setting of other speakers, the subwoofer sound may be excessive.
- If front and surround speakers are not placed at an equal distance from your listening position, set the distance according to the closest speaker.
- Do not place the surround speakers and the centre speaker farther away from your listening position than the front speakers.
- Depending on the input stream, the distance settings may not be effective.

## Speaker Level Settings (“LEVEL”)

You can individually set the loudness of each speaker. Use the test tone for easy adjustment (go to “Setting the speaker level by using the test tone” on page 94).

You can also adjust the levels without using the test tone. Select “LEVEL” (level) in the AMP menu. To use the AMP menu, see “Using the AMP Menu” (page 91).

The default settings are underlined.

**“TEST TONE”**

“ <u>T. TONE OFF</u> ”	Emits no test tone.
“T. TONE ON”	Emits test tone from the speakers in turn.

**“FL LEVEL” (front left speaker level)**

Set the front left speaker level between -6 dB to 0 dB in 1 dB increments. The default setting is “0.”

**“CEN LEVEL” (centre speaker level)**

Set the centre speaker level between -6 dB to +6 dB in 1 dB increments. The default setting is “0.”

**“FR LEVEL” (front right speaker level)**

Set the front right speaker level between -6 dB to 0 dB in 1 dB increments. The default setting is “0.”

**“SR LEVEL” (surround right speaker level)**

Set the surround right speaker level between -6 dB to +6 dB in 1 dB increments. The default setting is “0.”

**“SL LEVEL” (surround left speaker level)**

Set the surround left speaker level between -6 dB to +6 dB in 1 dB increments. The default setting is “0.”

**“SW LEVEL” (subwoofer speaker level)**

Set the subwoofer level between -6 dB to +6 dB in 1 dB increments. The default setting is “0.”

### To adjust the volume of all the speakers at one time

Press  $\triangleleft$  +/- on the remote. Or press VOLUME +/- on the centre unit.

## Setting the speaker level by using the test tone

- 1 Set the AMP/DVD switch to AMP, and press AMP MENU.

An AMP menu option appears in the centre unit display.

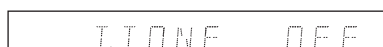
- 2 Press  $\uparrow/\downarrow$  repeatedly to select “LEVEL” (level), and press ENTER or  $\rightarrow$ .

Example:



TEST TONE

- 3 Press  $\uparrow/\downarrow$  to select “TEST TONE” (test tone), and press ENTER or  $\rightarrow$ .



T.TONE OFF

- 4 Press  $\uparrow/\downarrow$  to select “T. TONE ON” (test tone on).

The speakers emit the test tone in turn.

- 5 Press  $\leftarrow$  to return to the previous layer, and then press  $\uparrow/\downarrow$  to select a speaker; “FL LEVEL” (front left speaker level), “CEN LEVEL” (centre speaker level), “FR LEVEL” (front right speaker level), “SR LEVEL” (surround right speaker level), “SL LEVEL” (surround left speaker level), or, “SW LEVEL” (subwoofer level).

- 6 Press ENTER or  $\rightarrow$ .

The selected speaker emits the test tone.

- 7 From your listening position, adjust the speaker level by pressing  $\uparrow/\downarrow$ .

Check the status on the centre unit display.

Example: When outputting a test tone of -4 dB from the front left speaker.



FL LEVEL -4<sup>dB</sup>

- 8 Repeat steps 5 to 7 to adjust the other speaker levels.

- 9 When you finish adjusting levels, press  $\leftarrow$  to return to the previous layer.

- 10 Press  $\uparrow/\downarrow$  to select “TEST TONE,” and press ENTER or  $\rightarrow$ .

- 11 Press  $\uparrow/\downarrow$  to select “T. TONE OFF” (test tone off), and press AMP MENU to turn off the AMP menu.

### Note

When you adjust the speaker settings, the sound momentarily cuts off.

## Additional Speaker Settings (“CUSTOMIZE”)

You can make further setting to the speaker system with other surround options. For detailed explanations about all options, see also “Speaker Surround Options” (page 84).

Select “CUSTOMIZE” in the AMP menu. To use the AMP menu, see “Using the AMP Menu” (page 91). The default settings are underlined.

### “AUDIO DRC” (audio dynamic range compression) (Dolby Digital DVD only)

Narrows the dynamic range of a soundtrack to make it audible even at low volume. This setting is effective only when listening with the speaker system. See page 87 for details.

“ <u>DRC OFF</u> ”	No compression of dynamic range.
“DRC STD” (DRC standard)	Reproduces the soundtrack with the dynamic range that the recording engineer intended.
“DRC MAX”	Maximum compression of dynamic range.

### “DUAL MONO” (dual mono) (For multiplex broadcast only)

Allows you to enjoy multiplex broadcast sound when AC-3 multiplex broadcast signals are received. See page 89 for details.

“ <u>MAIN</u> ”	Outputs the main sound from the centre speaker.
“SUB”	Outputs the sub sound from the centre speaker.
“MAIN+SUB”	Outputs the main and sub sounds from the centre speaker.
“MAIN/SUB”	Outputs the main sound from the front left speaker, and sub sound from the front right speaker.

#### Note

If “CENTER SP” is set to “CENTER NO” in the AMP menu (page 92), sound is output from the front left and right speakers.

### “A/V SYNC”

Adjusts any delay between picture and sound. See page 88 for details.

“ <u>SYNC OFF</u> ”	Does not adjust.
“SYNC ON”	Adjust the delay between the picture and sound.

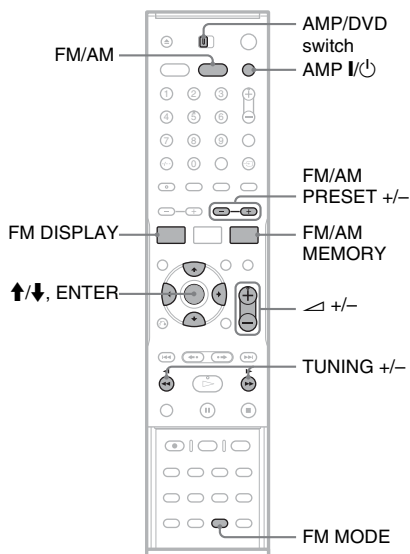
## Other Operations

### Enjoying the Radio

Connect the FM/AM aerials to the subwoofer (page 17) and preset radio stations.

#### Note

You cannot record FM/AM radio sound using the recorder or connected equipment.



### Presetting radio stations

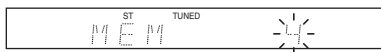
You can preset 20 FM stations, and 10 AM stations. Before tuning, make sure to turn down the volume to minimum.

- 1 Press **AMP I/O** to turn on the speaker system.
- 2 Set the **AMP/DVD switch** to **AMP**.
- 3 Press **FM/AM** repeatedly to select **FM** or **AM**.
- 4 Press and hold **TUNING +/-** until auto scanning starts.

Scanning stops when the system tunes in a station. The “TUNED” indicator (along with the “ST” indicator for stereo programmes) lights up in the centre unit display.



- 5 Press **FM/AM MEMORY**.  
A preset number appears.



- 6 Press **↑/↓** to select the preset number you want.



- 7 Press **ENTER**.  
The station is stored.



- 8 Repeat steps 3 to 7 to store other stations.

#### To change the preset number

Repeat the above steps and select a different preset number in step 6.

### Listening to the radio

- 1 Press **AMP I/O** to turn on the speaker system.
- 2 Press **FM/AM** repeatedly to select **FM** or **AM**.  
The last received station is tuned in.
- 3 Press **FM/AM PRESET +/-** to select the preset station you want.
- 4 Press **△ (volume) +/-** to adjust the volume.



#### To turn off the radio

Press **AMP I/O** to turn off the speaker system.

#### To listen to non-preset radio stations

Use manual or automatic tuning in step 3 above.



- To tune in a station manually, press TUNING +/–.
- To start auto tuning, press and hold TUNING +/–. If you want to stop scanning, press TUNING +/– again.

### If FM sound is noisy

Press FM MODE so that “MONO” appears in the centre unit display. There will be no stereo effect, but reception will improve. To restore the stereo effect, press FM MODE again.

### Hints

- You can also select a preset station using the number buttons and SET button.
- To improve reception, reorient the aerials.
- You can also select FM or AM by pressing FUNCTION on the centre unit repeatedly. “AM” or “FM” appears in the centre unit display.

### About the Radio Data System (RDS)

The Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular broadcast signal. This tuner offers convenient RDS features, such as station name display. RDS is available only on FM stations\*.

\* Not all FM stations provide the RDS service, neither do they provide the same type of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

### Note

RDS may not work properly if the station you are tuned to is not transmitting the RDS signal properly, or if the signal strength is weak.

### To receive RDS broadcasts

Simply select a station from the FM band.  
When you tune in a station that provides RDS services, the station name\* appears in the display.  
\* If an RDS broadcast is not received, the station name may not appear in the display.

 **Hint**

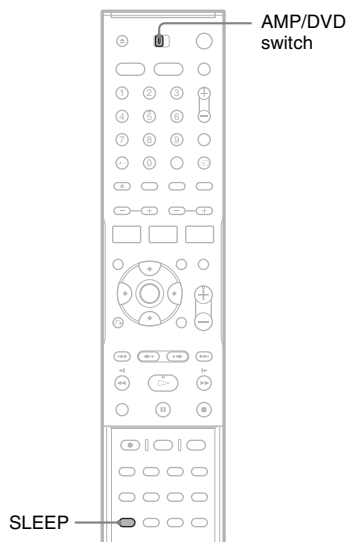
When a station name is displayed, you can check the frequency by pressing FM DISPLAY repeatedly.

## Using the Sleep Timer

You can set the speaker system to turn off at a preset time, so you can fall asleep listening to music. You can set a time up to 90 minutes in 10-minute increments.

### Note

The sleep timer function works for the speaker system only. The recorder remains turned on.



- 1 Set the AMP/DVD switch to AMP.
- 2 Press SLEEP repeatedly.

Each time you press the button, the centre unit display (the remaining time) changes as follows:

SLEEP 90M → SLEEP 80M → SLEEP 70M  
↑ ↓  
SLEEP OFF ← SLEEP 10M ..... SLEEP 60M

The “SLEEP” indicator lights up in the centre unit display.

### To check the remaining time

Press SLEEP once.

### To change the remaining time

Press SLEEP repeatedly to select the desired time.

### To cancel the function

Press SLEEP repeatedly until "SLEEP OFF" appears in the centre unit display.

## Operating Other Equipment With the Supplied Remote

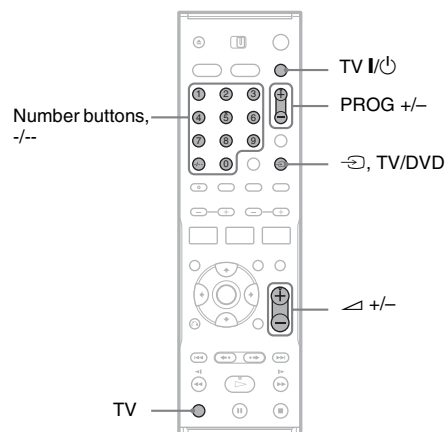
You can use the supplied remote to operate your TV, or other Sony DVD player/recorder (page 99).

### Controlling TVs with the remote

You can adjust the remote's signal to control your TV.

#### Notes

- Depending on the connected unit, you may not be able to control your TV with some or all of the buttons below.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number may be reset to the default setting. Set the appropriate code number again.



- 1** Hold down TV I/II.
- 2** Enter your TV's manufacturer code (see "Code numbers of controllable TVs" below) using the number buttons.
- 3** Release TV I/II.

The remote is set to control your TV.  
Press the following buttons while holding down the TV button on the remote.

TV I/II

Turns your TV on or off

△ +/-	Adjusts the volume of your TV
⏻ TV/DVD	Switches your TV's input source
PROG +/-	Selects the programme position on a Sony TV
Number buttons and -/--*	Selects the programme position on a Sony TV

\* When selecting the TV's two-digit programme position, press -/-- and then the number buttons. Hold down the TV button for the whole time.

### To operate the TV/DVD button (for SCART connections only)

The ⏻ TV/DVD button switches between the recorder and the last input source selected on the TV. Point your remote at the recorder when using this button. When you connect the recorder to the TV via the SCART jacks, the input source for the TV is set to the recorder automatically when you turn the power on. To watch another source, Hold down TV and press ⏻ TV/DVD to switch the TV's input source.

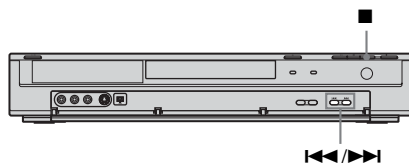
### Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code number
Sony	01 (default)
Grundig	04
Hitachi	06
Panasonic	05, 12
Philips	02, 03
Samsung	13
Sanyo	07
Sharp	08
Thomson	11
Toshiba	10
JVC	09

## If you have a Sony DVD player or more than one Sony DVD recorder

If the supplied remote interferes with your other Sony DVD recorder or player, set the command mode number for this recorder and the supplied remote to one that differs from the other Sony DVD recorder or player.

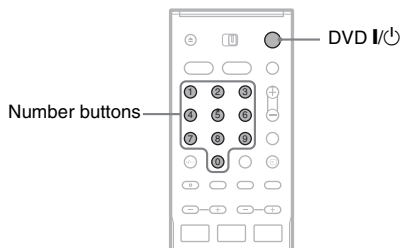


- 1 Turn off the recorder.
- 2 Hold down ■ (stop) on the recorder until "MODE" appears in the front panel display.
- 3 While pressing ■ (stop), repeatedly press ⏮/⏭ on the recorder to select the command mode (MODE 1, 2, or 3).

Front panel display

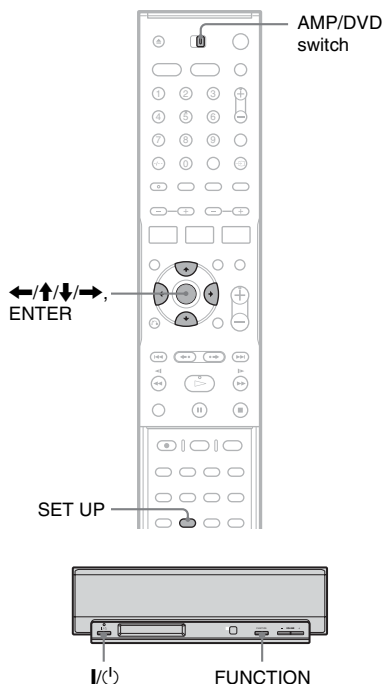


- 4 While pressing DVD I/⏻ on the remote, press the number buttons to set the same command mode for the remote as you selected above.

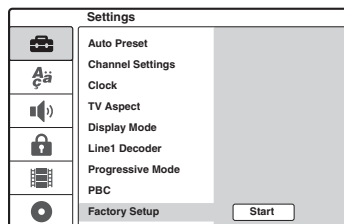


Command mode	Enter
"MODE 1"	01
"MODE 2"	02
"MODE 3" (default)	03

## Returning the Speaker System and Recorder to Their Default Settings



- 1 Set the AMP/DVD switch to DVD, and press SET UP to turn on the Setup Display.
- 2 Select [Settings] and press .
- 3 Select [Factory Setup], and press .



- 4 Press ENTER while [Start] is selected. The display asks for confirmation.
- 5 Select [OK] and press ENTER.

## Resetting the speaker system

The following returns the speaker system settings (for speakers, radio, etc.) to their defaults.

- 1 Press I/⏻ on the centre unit to turn on the speaker system.
- 2 Hold down FUNCTION, and then press I/⏻ for about five seconds.  
“COLD RESET” appears in the centre unit display, and the speaker system settings return to their defaults.

## Resetting the recorder

You can reset the recorder to all its default settings. Note that the [Parental Control], [Auto Preset], [Clock], and [OSD] settings remain as stored.

# Troubleshooting

If you experience any of the following difficulties while using the system, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

When bringing the system in for repairs, be sure to bring in the entire system.

This product is a system product, and the entire system is needed to determine the location requiring repair.

## Power

### The power does not turn on.

- ➔ Check that the mains leads are connected securely.
- ➔ The system cord is not connected to the subwoofer securely. Disconnect the subwoofer mains lead, and then the system cord. Reconnect the system cord, and then connect the mains lead after about two minutes.

### I/⏻ indicator on the centre unit flashes.

- ➔ Unplug the subwoofer mains immediately, and make sure that:
    - The speaker cords are not short circuited.
    - Only the specified speakers are used.
    - The ventilation holes are not blocked.
- When all of the above are confirmed, wait about two minutes until the I/⏻ indicator turns off, reconnect the subwoofer mains lead, and then turn on the speaker system. If the indicator still flashes, consult your nearest Sony dealer.

## Picture

### There is no picture.

- ➔ Re-connect all connecting cords securely.
- ➔ The connecting cords are damaged.
- ➔ Check the connection to your TV (page 20).
- ➔ Switch the input selector on your TV to “VCR” etc., so that the signal from the recorder appears on the TV screen.
- ➔ If you connect the recorder to your TV via the LINE 1-TV jack, set the VIDEO OUT SELECT switch on the rear panel to “RGB” (page 21).

- ➔ If you connect the recorder to your TV via only the COMPONENT VIDEO OUT jacks, set the VIDEO OUT SELECT switch on the rear panel to “COMPONENT” (page 21).
- ➔ When [Progressive Mode] is set to [On] (page 78), signals are only sent to the COMPONENT VIDEO OUT jacks.
- ➔ This recorder cannot record NTSC signals.

### Picture noise appears.

- ➔ If the picture output signal from your recorder passes through your VCR to get to your TV, or if you are connected to a combination TV/VIDEO player, the copy-protection signal applied to some DVD programmes could affect picture quality. If you still experience this problem even when you connect your recorder directly to your TV, try connecting your recorder to your TV's S VIDEO input.
- ➔ You have set the recorder to progressive format (the PROGRESSIVE indicator lights up) even though your TV cannot accept the progressive signals. In this case, remove the disc and close the disc tray. Then press and hold ■ (stop) on the recorder for five seconds.
- ➔ Even if your TV is compatible with progressive format (625p) signals, the image may be affected when you set the recorder to progressive format. In this case, remove the disc and close the disc tray. Then press and hold ■ (stop) on the recorder for five seconds.
- ➔ You are playing a disc recorded in a colour system that is different from your TV.

### TV programme reception does not fill the screen.

- ➔ Set the channel manually in [Channel Settings] in [Settings] Setup (page 75).
- ➔ Select the correct source using the INPUT SELECT button, or select a channel of any TV programme using the PROG +/- buttons.

### TV programme pictures are distorted.

- ➔ Reorient the TV aerial.
- ➔ Adjust the picture (see the TV's instruction manual).
- ➔ Place the recorder and TV farther apart.
- ➔ Place the TV and any bunched aerial cables farther apart.
- ➔ The RF cable is connected to the AERIAL OUT jack on the recorder. Connect the cable to the AERIAL IN jack.

---

### **TV channels cannot be changed.**

- ➔ The channel is disabled (page 75).
- ➔ A timer recording started, which changed the channels.

---

### **The picture from equipment connected to the recorder's input jack does not appear on the screen.**

- ➔ If the equipment is connected to the LINE 1-TV jack, select "LINE 1" in the front panel display by pressing INPUT SELECT.  
If the equipment is connected to the LINE 2 IN jacks, select "LINE 2" in the front panel display by pressing INPUT SELECT.  
If the equipment is connected to the LINE 4 IN jacks, select "LINE 4" in the front panel display by pressing INPUT SELECT.  
If the equipment is connected to the LINE 3/DECODER jack, select "LINE 3" in the front panel display by pressing INPUT SELECT.  
If the equipment is connected to the DV IN jack, (this is usually for a digital video camera connection), select "DV" in the front panel display by pressing INPUT SELECT.

---

### **The playback picture or TV programme from the equipment connected through the recorder is distorted.**

- ➔ If the playback picture output from a DVD player, VCR, or tuner goes through your recorder before reaching your TV, the copy-protection signal applied to some programmes could affect picture quality. Disconnect the playback equipment in question and connect it directly to your TV.

---

### **The picture does not fill the screen.**

- ➔ Set [TV Aspect] in [Settings] Setup in accordance with the aspect ratio of your TV (page 77).

---

### **The picture does not fill the screen, even though the aspect ratio is correctly set in [TV Aspect] in [Settings] Setup.**

- ➔ The aspect ratio of the disc is fixed on your DVD.

---

### **The picture is black and white.**

- ➔ If you are using a SCART cord, be sure to use one that is fully wired (21 pins).

---

## **Sound**

### **There is no sound.**

- ➔ The connecting cord is damaged.
- ➔ The input source setting on the supplied speaker system or the connection to the speaker system is incorrect.
- ➔ The recorder is in reverse play, fast forward, slow motion, or pause mode.
- ➔ If the audio signal does not come through the DIGITAL OUT (OPTICAL or COAXIAL) jacks, check the [Audio] Setup settings (page 79).
- ➔ Press MUTING if "MUTING ON" is displayed in the centre unit display.
- ➔ Check the speaker settings (page 14).

---

### **Sound is noisy.**

- ➔ When playing a CD with DTS sound tracks, noise will come from the LINE 2 OUT (AUDIO L/R) jacks, LINE 1-TV jack, or LINE 3/DECODER jack (page 55).

---

### **The sound volume is low.**

- ➔ The sound volume is low on some DVDs.  
For the supplied speaker output, set "AUDIO DRC" in AMP menu to "DRC MAX" or "DRC STD" (page 87).  
For other sound output, set [Audio DRC] in [Audio] setup to [On] (page 80).

---

### **An alternate audio track cannot be recorded or played.**

- ➔ If an audio channel other than "Main+Sub" is selected, you cannot record both main and sub sounds. Check the selected audio channel before you start recording.
- ➔ To enjoy bilingual programmes through the supplied speaker system, select the audio channel in the "DUAL MONO" setting of the AMP menu (page 89).

---


### **Severe hum or noise is heard.**

- ➔ Check that the speakers and components are connected securely.
- ➔ Check that the connecting cords are not too close to a transformer or motor, and at least three metres away from your TV set or any fluorescent lighting.
- ➔ Move your TV away from the system.
- ➔ The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

- ➔ Clean the disc.

---

### **The sound loses stereo effect when you play a DVD+RW, DVD+R, DVD-RW, DVD-R or VIDEO CD.**

- ➔ Select a stereo audio track by pressing  (audio) (page 53).
- ➔ Make sure the system is connected properly.
- ➔ Check the "DUAL MONO" setting (page 89).

---

### **The surround effect of the speaker system is difficult to hear when Dolby Digital or DTS audio sound track is played.**

- ➔ Make sure the Sound Field function is on (page 85).
- ➔ Check the speaker connections and settings (page 14, 79).
- ➔ Depending on the disc, the output signal may not contain all of the 5.1 channels. Or, the track may be either monaural or stereo even when recorded in Dolby Digital format.

---

### **There is no sound from the subwoofer**

- ➔ Check the speaker settings (page 14, 91).
- ➔ Set the Sound Field setting to "A.F.D. AUTO" (page 85).

---

### **The left and right sounds are unbalanced or reversed.**

- ➔ Check that the speakers and the components are connected correctly and securely.

---

### **The sound comes from the centre unit only.**

- ➔ Depending on the disc, the sound may come from the centre unit only.

---

### **No sound is heard from the centre unit.**

- ➔ Check the speaker connections and settings (page 14, 91).
- ➔ Make sure the Sound Field function is on (page 85).
- ➔ Depending on the source, the effect of the surround speakers may be less noticeable.

---

### **No sound or only a very low-level sound is heard from the surround speakers.**

- ➔ Check the speaker connections and settings (page 14, 91).
- ➔ Make sure the Sound Field function is on (page 85).

- ➔ Depending on the source, the effect of the surround speakers may be less noticeable.

---

## **Playback**

### **The disc does not play.**

- ➔ The disc is upside down. Insert the disc with the playback side facing down.
- ➔ The disc is not correctly inserted.
- ➔ Moisture has condensed inside the recorder.  
Remove the disc and leave the recorder turned on for about half an hour until the moisture evaporates.
- ➔ If the disc was recorded on another recorder, this recorder cannot play the disc if it was not finalized (page 39).

---

### **The disc does not start playback from the beginning.**

- ➔ Resume play was activated (page 52).
- ➔ You have inserted a disc whose Title menu or DVD menu automatically appears on the TV screen when it is first inserted. Use the menu to start playback.

---

### **The recorder starts playing the disc automatically.**

- ➔ The DVD VIDEO features an auto playback function.

---

### **Playback stops automatically.**

- ➔ If the disc has an auto pause signal, the recorder stops playback at the auto pause signal.

---

### **Some functions such as Stop, Search, or Slow-motion Play cannot be performed.**

- ➔ Depending on the disc, you may not be able to do some of the operations above. See the instructions supplied with the disc.

---

### **The language for the sound track cannot be changed.**

- ➔ Multilingual tracks are not recorded on the disc being played.
- ➔ The DVD VIDEO prohibits the changing of the language for the sound track.
- ➔ Try changing the language using the DVD VIDEO's menu.


---

### **The subtitle language cannot be changed or turned off.**

- ➔ Multilingual subtitles are not recorded on the DVD VIDEO.
- ➔ The DVD VIDEO prohibits changing of the subtitles.
- ➔ Try changing the subtitle using the DVD VIDEO's menu.
- ➔ The subtitles cannot be changed for the titles recorded using this recorder.

---

### **The angles cannot be changed.**

- ➔ Multi-angles are not recorded on the DVD VIDEO being played.
- ➔ You are trying to change the angles when “” does not appear in the front panel display (page 53).
- ➔ The DVD VIDEO prohibits changing angles.
- ➔ Try changing the angle using the DVD VIDEO's menu.
- ➔ The angles cannot be changed for the titles recorded on this recorder.

---

### **The MP3 audio tracks or JPEG image files do not play.**

- ➔ The MP3 audio tracks or JPEG image files are not recorded in a format that the recorder can play (page 10).

---

## **Recording/Timer recording/Editing**

### **The programme position cannot be changed from the channel you are recording.**

- ➔ Set the TV's input source to “TV.”

---

### **Recording does not start immediately after you press ● REC.**

- ➔ Operate the recorder only after “LOADING,” “INITIALIZE,” or “WRITE DISC” disappears on the front panel display.

---

### **Nothing was recorded even though you set the timer setting correctly.**

- ➔ The recorder was already turned on at the timer recording start time. Set the recorder to standby mode before timer recording starts.
- ➔ There was a power failure during recording.
- ➔ The recorder's internal clock stopped due to a power failure. Reset the clock (page 77).
- ➔ The channel was disabled after the timer recording was set. See [Channel Settings] on page 75.
- ➔ Disconnect the mains lead from the mains, and connect it again.

- ➔ The programme contains copy protection signals that restrict copying.
- ➔ Another timer setting overlapped the timer setting (page 46).
- ➔ There is no recordable disc inserted in the recorder.
- ➔ There is not enough disc space for the recording.
- ➔ The disc is protected (DVD+RW, DVD-RW, DVD+R) (page 39).
- ➔ The recorder was in the process of DV Dubbing (page 70).

---

### **Recording does not stop immediately after you press ■.**

- ➔ It will take a few seconds for the recorder to input disc data before recording can stop.

---

### **Timer recording is not complete or did not start from the beginning.**

- ➔ There was a power failure before or during recording. Reset the clock (page 77).
- ➔ Another timer setting overlapped the timer setting (page 46).
- ➔ There is not enough disc space for the recording.
- ➔ The PDC/VPS function is working (page 43).

---

### **Contents previously recorded were erased.**

- ➔ Data that has been recorded on a DVD with a PC will be erased from the disc when the disc is inserted.

---

### **The PDC/VPS function does not operate.**

- ➔ Check that the clock and date are set correctly.
- ➔ Check that the PDC/VPS time you set is the correct one (there might be a mistake in the TV programme guide). If the broadcast you wanted to record did not send accurate PDC/VPS information, the recorder will not start recording.
- ➔ If the reception is poor, the PDC/VPS signal might be altered and the recorder might not start recording.
- ➔ [PDC/VPS] is set to [Off] (page 43).

---

## **Display**

### **The clock has stopped.**

- ➔ Set the clock again (page 77).
- ➔ The clock stopped due to a power failure. Reset the clock (page 77).

---

### **The TIMER REC indicator is flashing.**

- ➔ The disc does not have enough space.



- ➔ Insert a recordable disc into the recorder.

---

### **The recording mode indication is incorrect.**

- ➔ When the recording or dubbing is less than three minutes, the recording mode indication may be displayed incorrectly. The actual recording itself is correctly made in the selected recording mode.

---

## **Remote control**

### **The remote does not function.**

- ➔ Batteries are weak.
- ➔ The remote is too far from the recorder or the centre unit.
- ➔ The remote's manufacturer code returned to the default setting when you replaced the batteries. Reset the code (page 98).
- ➔ Turn on the recorder and/or the centre unit.
- ➔ Point the remote at the recorder when operating the recorder, and at the centre unit when operating the speaker system.
- ➔ Different command modes are set for the recorder and remote. Set the same command mode (page 99).
- ➔ Set the AMP/DVD switch to the other position, and try again (page 109).

---

### **Other Sony equipment responds to the remote.**

- ➔ The same command mode is set for both the equipment and recorder. Set a different command mode for the recorder (page 99).

---

## **Others**

### **Radio stations cannot be tuned in.**

- ➔ Check that the FM/AM aerial is connected securely. Adjust the aerial or connect an external aerial, if necessary.
- ➔ The reception is poor. Try manual tuning (page 96).
- ➔ No stations have been preset or the preset stations have been cleared (when tuning by scanning preset stations). Preset the stations (page 96).
- ➔ Press FM DISPLAY so that the frequency appears in the centre unit display.
- ➔ Keep the AM aerial away from the system and other equipment (recorder, subwoofer, TV, etc.).

---

### **The recorder does not operate properly.**

- ➔ Restart the recorder. Press down DVD I/⏻ on the recorder for more than ten seconds to turn off the recorder. If a disc is still in the recorder, press ▲ (open/close) and remove the disc.
- ➔ When static electricity, etc., causes the recorder to operate abnormally, turn off the recorder and wait until the clock appears in the front panel display. Then, unplug the recorder and after leaving it off for a while, plug it in again.

---

### **The disc tray does not open after you press ▲ (open/close).**

- ➔ It may take a few seconds for the disc tray to open after you have recorded or edited a disc. This is because the recorder is adding disc data to the disc.

---

### **Mechanical sound is heard when the recorder is off.**

- ➔ While the recorder is adjusting the clock for the Auto Clock Set function or scanning the channels for the PDC/VPS function, operational noises (such as the internal fan) may be heard, even when the power is off. This is not a malfunction.

---

### **Mechanical sound is heard from the subwoofer or the recorder when no disc is played.**

- ➔ The recorder and the subwoofer have ventilation fans, which operate when the power is on. Mechanical sound may also be heard when the disc spins. These are operational sounds and are not malfunctions.

---

### **The speaker does not work normally.**

- ➔ Disconnect the mains lead of the subwoofer from the mains. Wait about two minutes until the I/⏻ indicator on the centre unit turns off, and then connect the mains lead.

## Notes About This System

### On operation

- If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the system. Should this occur, the system may not operate properly. In this case, remove the disc and leave the system turned on for about half an hour until the moisture evaporates.
- When you move the system, take out any discs. If you do not, the disc may be damaged.

### On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

### On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

If you have any questions or problems concerning your system, please consult your nearest Sony dealer.

### On cleaning discs

Do not use a commercially available cleaning disc. It may cause a malfunction.

### On your TV's colour

If the speakers should cause the TV screen to have colour irregularity, turn off the TV at once then turn it on after 15 to 30 minutes. If colour irregularity should persist, place the speakers farther away from the TV set.

### Notes about the discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface. Dust, fingerprints, or scratches on the disc may cause it to malfunction.

- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After playing, store the disc in its case.
- Clean the disc with a cleaning cloth. Wipe the disc from the centre out.



- Do not use solvents such as benzene, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.
- Do not use the following discs.
  - A disc that has a non-standard shape (e.g., card, heart).
  - A disc with a label or sticker on it.
  - A disc that has cellophane tape or sticker adhesive on it.



# Specifications

Design and specifications are subject to change without notice.

For supplied accessories, see page 12.

## DVD recorder specifications

### System

**Laser:** Semiconductor laser

**Channel coverage:**

PAL/SECAM (B/G, D/K, I, L)

VHF: E2 to E12, R1 to R12, F1 to F10, Italian A to H, Ireland A to J, South Africa 4 to 13/  
UHF: E21 to E69, R21 to R69, B21 to B69,  
F21 to F69/CATV: S01 to S05, S1 to S20,  
France B to Q/HYPER: S21 to S41

The above channel coverage merely ensures the channel reception within these ranges. It does not guarantee the ability to receive signals in all circumstances.

**Video reception:** Frequency synthesizer system

**Audio reception:** Split carrier system

**Aerial out:** 75-ohm asymmetrical aerial socket

**Timer:** Clock: Quartz locked/Timer indication:  
24-hour cycle (digital)

**Video recording format:** MPEG Video

**Audio recording format:** Dolby Digital/2 ch

### Inputs and outputs

#### LINE 2 OUT

(AUDIO): Phono jack/2 Vrms/600 ohms

(VIDEO): Phono jack/1.0 Vp-p

(S VIDEO): 4-pin mini DIN/Y:1.0 Vp-p, C: 0.3 Vp-p (PAL)

#### LINE 2 IN/LINE 4 IN

(AUDIO): Phono jack/2 Vrms/more than 47 kilohms

(VIDEO): Phono jack/1.0 Vp-p

(S VIDEO): 4-pin mini DIN/Y:1.0 Vp-p, C: 0.3 Vp-p (PAL)

#### LINE 1-TV: 21-pin

CVBS IN/OUT

RGB OUT (upstream)

#### LINE 3/DECODER: 21-pin

CVBS IN/OUT

Decoder

DV IN: 4-pin/i.LINK S100

**DIGITAL OUT (OPTICAL):** Optical output  
jack/-18 dBm (wave length: 660 nm)

**DIGITAL OUT (COAXIAL):** Phono jack/0.5 Vp-p/75 ohms

### COMPONENT VIDEO OUT

(Y, P<sub>B</sub>/C<sub>B</sub>, P<sub>R</sub>/C<sub>R</sub>):

Phono jack/Y: 1.0 Vp-p, P<sub>B</sub>/C<sub>B</sub>: 0.7 Vp-p,  
P<sub>R</sub>/C<sub>R</sub>: 0.7 Vp-p

### General

**Power requirements:** 220-240 V AC, 50/60 Hz

**Power consumption:** 30W

**Dimensions (approx.):** 430 × 75 × 293 mm

(width/height/depth) incl. projecting parts

**Mass (approx.):** 4.0 kg

**Operating temperature:** 5 °C to 35 °C

**Operating humidity:** 25 % to 80 %

### Compatible colour systems

This recorder is designed to record and play using the PAL colour system.

The signals of the SECAM colour system can be received or recorded but will be played back in the PAL colour system only. Recording of video sources based on other colour systems cannot be guaranteed.

## Speaker system specifications

### AUDIO POWER

#### Amplifier section

**Stereo mode (rated):**

55W+55 W (3 ohms at 1 kHz, DIN)

**Music power output when in surround mode (reference):**

Front: 120 W+120 W (with SS-TS31)/

Centre\*: 120 W (with SS-CTRD1)/

Surround\*: 120 W+120 W (with SS-TS31B)/

Subwoofer\*: 120 W (with SA-WSRD1)

\* There may be no sound output depending on the source and the Sound Field setting.

#### FM/AM tuner section

**System:** PLL quartz-locked digital synthesizer system

**FM tuner:** Tuning range: 87.5-108.0 MHz (50 kHz step)/Aerial type: FM wire aerial/Aerial terminal: 75 ohms, unbalanced/Intermediate frequency: 10.7 MHz

**AM tuner:** Tuning range: 531-1,602 kHz (with the interval set at 9 kHz)/Aerial type: AM loop aerial/Intermediate frequency: 450 kHz

## Speakers

**Front:** Speaker system: Bass reflex/Speaker unit:

65 mm dia. cone type/Rated impedance: 2.7 ohms/Dimensions (approx.): 90 × 132 × 107 mm (w/h/d)/Mass (approx.): 0.6 kg

**Centre:** Speaker system: Bass reflex/Speaker unit:

65 mm dia. cone type/Rated impedance: 2.7 ohms/Dimensions (approx.): 360 × 110 × 97 mm (w/h/d)/Mass (approx.): 1.5 kg

**Surround:** Speaker system: Bass reflex/Speaker unit:

65 mm dia. cone type/Rated impedance: 2.7 ohms/Dimensions (approx.): 90 × 132 × 107 mm (w/h/d)/Mass (approx.): 0.5 kg

**Subwoofer:** Speaker system: Bass reflex/Speaker unit:

200 mm dia. cone type/Rated impedance: 2.7 ohms/Dimensions (approx.): 270 × 325 × 413 mm (w/h/d)/Mass (approx.): 10.0 kg

## General

**Power requirements:** 220-240 V AC, 50/60 Hz

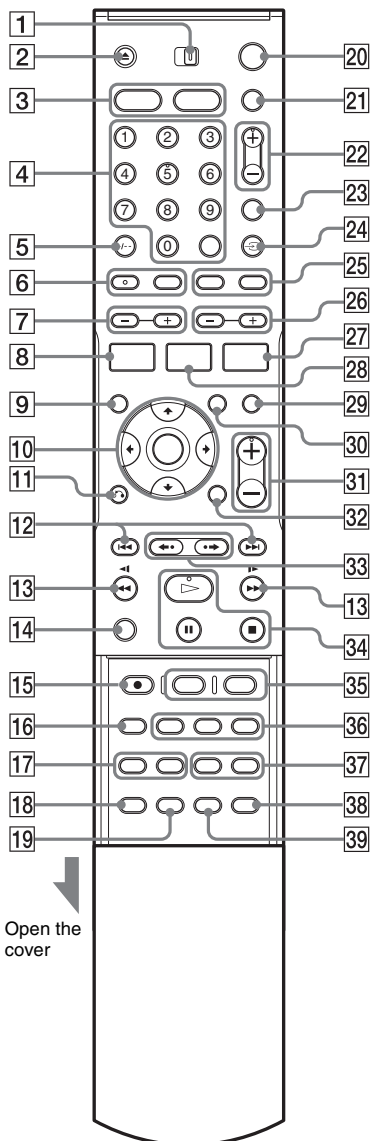
**Power consumption:** On: 145 W/Standby: 0.3 W

# Guide to Parts and Controls

For more information, see the pages in parentheses.

Recorder and centre unit buttons of the same/similar name have the same function as the buttons on the remote.

## Remote



The supplied remote operates both the recorder and speaker system.

Point the remote at (remote sensor) on the recorder. Or, point it at on the centre unit when operating the speaker system.

- 1** AMP/DVD switch (28, 29)
- 2** (open/close) button (31, 53, 58)
- 3** DVD button (33)  
FM/AM button (96)
- 4** Number buttons (38, 44, 56, 99)  
SET button (56)
- 5** CLEAR/-/- (ten digit) button (44, 46, 56, 98)
- 6** (audio) button (53)  
 (subtitle) button (53)
- 7** SOUND FIELD +/- buttons (85)
- 8** DISPLAY button (35, 48, 56)/FM  
DISPLAY\* button (96)
- 9** TOP MENU button (51, 57, 61)
- 10** /ENTER button (28, 33, 37)
- 11** RETURN button (33, 42, 46, 57, 61)
- 12** (previous)/ (next) buttons (53, 58, 61)
- 13** (search) buttons (53, 58)/  
TUNING +/-\* buttons (96)
- 14** TV button (98)
- 15** REC button (32, 47, 49, 71)
- 16** REC MODE button (32, 41, 49, 71)
- 17** REPEAT button (55, 58)  
A-B button (55, 58)
- 18** SUR (surround) button (22)/SLEEP\*  
button (97)
- 19** SET UP button (28, 31, 74)/DIMMER\*  
button (84)

- 20 DVD I/⏻ (DVD recorder power on/standby) button (28, 31, 42, 44)
- 21 TV/AMP I/⏻ (TV/speaker system power on/standby) button (29, 96, 98)
- 22 PROG (programme) +/- buttons (32, 47)
- 23 INPUT SELECT button (49, 71)
- 24 ↺ TV/DVD button (48, 98)
- 25 BOOKMARK button (56)  
SEARCH MODE button (56)
- 26 FM/AM PRESET +/- buttons (96)
- 27 TIMER button (42, 44, 46), FM/AM MEMORY\* button (96)
- 28 TITLE LIST button (33, 51, 64)/AMP MENU\* button (91)
- 29 MUTING button (53)
- 30 MENU button (51, 57)
- 31 ▢ (volume) +/- buttons (96, 98)
- 32 TIME button (36)
- 33 ◀• (instant replay)/•▶ (instant advance) buttons (53)

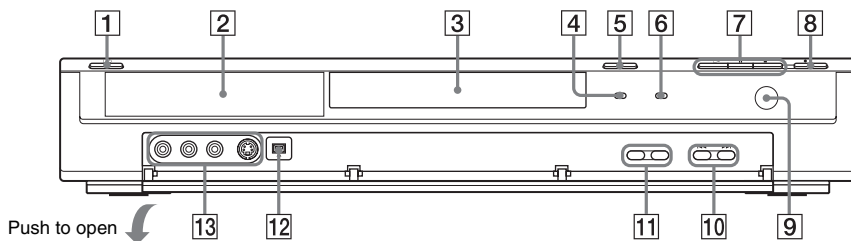
- 34 ▷ (play) button (51, 57)  
■ (pause) button (47, 53, 58, 61)  
■ (stop) button (32, 33)
- 35 CHAPTER MARK button (68)  
PICTURE MARK button (34)
- 36 □ (Picture-in-Picture) button (55)  
ZOOM button (54)  
⌂ (angle) button (53)
- 37 PROGRAM button (59)  
RANDOM button (55, 58)
- 38 DSGX button (87)
- 39 FM MODE button (96)

\* The functions work only when the AMP/DVD switch is set to AMP.

#### 💡 Hints

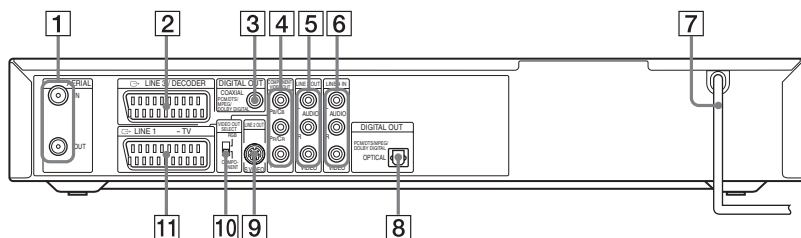
- You can use the buttons with an orange dot next to them with your TV while pressing down the TV button (page 98).
- The PROG +, number 5, ⏮ (audio), ▷ (play), and ▢ (volume) + buttons have a tactile dot. Use as a reference when operating the system.

## DVD recorder



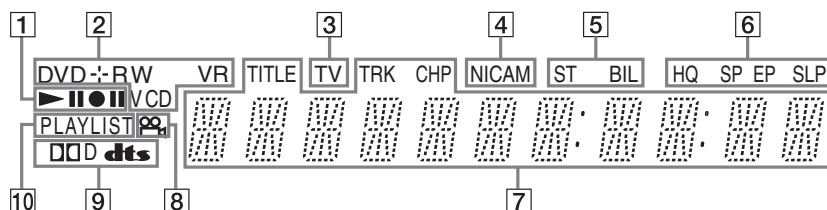
- 1 I/⏻ (on/standby) button (28, 31, 42, 44)
- 2 Front panel display (36, 111)
- 3 Disc tray (31)
- 4 TIMER REC indicator (42, 44)
- 5 ≡ (open/close) button (31, 53, 58)
- 6 PROGRESSIVE indicator (21)
- 7 ▷ (play) button (51, 57)  
■ (pause) button (47, 53, 58, 61)  
■ (stop) button (32, 33)
- 8 ● REC button (32, 47, 49, 71)
- 9 □ (remote sensor) (12)
- 10 ◀▶ (previous/next) buttons (53, 58)
- 11 PROGRAM +/- buttons (32, 47)
- 12 DV IN jack (70)
- 13 LINE 2 IN (VIDEO, AUDIO L/R, S VIDEO) jacks (25)

## Rear panel



- |   |  |
|---|--|
| <b>1</b> AERIAL IN/OUT jacks (19)                         | <b>6</b> LINE 4 IN (AUDIO L/R, VIDEO) jacks (25) |
| <b>2</b> LINE 3/DECODER jack (26, 27)                     | <b>7</b> Mains lead (23)                         |
| <b>3</b> DIGITAL OUT (COAXIAL) jack (22)                  | <b>8</b> DIGITAL OUT (OPTICAL) jack (18)         |
| <b>4</b> COMPONENT VIDEO OUT (Pb/Cb, Pr/Cr, Y) jacks (20) | <b>9</b> LINE 2 OUT (S VIDEO) jack (20)          |
| <b>5</b> LINE 2 OUT (AUDIO L/R, VIDEO) jacks (20, 22)     | <b>10</b> VIDEO OUT SELECT switch (20)           |
|   | <b>11</b> LINE 1 – TV jack (20)                  |

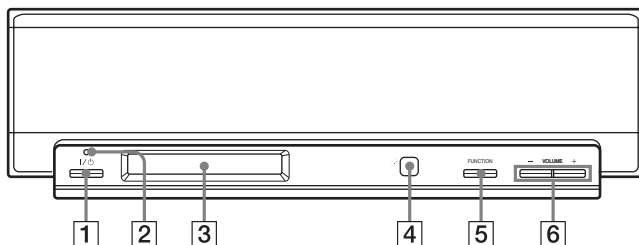
## Front panel display



- |  |   |
|--|---|
| <b>1</b> Playing/recording status (36, 48)           | <b>8</b> (angle) indicator (53)               |
| <b>2</b> Disc type*/recording format (8)             | <b>9</b> Audio signal indicators (35, 53, 57) |
| <b>3</b> TV indicator (48)                           | <b>10</b> PLAYLIST indicator (34, 63)         |
| <b>4</b> NICAM indicator (41)                        |   |
| <b>5</b> ST (stereo)/BIL (bilingual) indicators (41) |   |
| <b>6</b> Recording mode indicators (32, 41, 49)      |   |
| <b>7</b> Displays the following (36, 48):            |   |
| • Playing time/remaining time                        |   |
| • Current title/chapter/track number                 |   |
| • Recording time/remaining time                      |   |
| • Clock  |   |
| • Programme position                                 |   |

\* Displays DATA CDs as "CD."

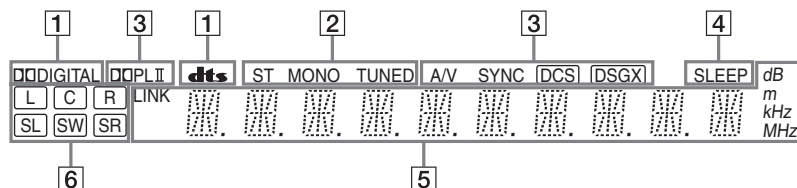
## Centre unit



- 1** I/O (Speaker system power on/standby button (100)
- 2** I/O indicator (23)
- 3** Centre unit display (see below)
- 4** (remote sensor) (for speaker system operation) (12)  
When adjusting the radio or the speaker system, point the remote at this sensor.
- 5** FUNCTION button (100)  
Switches the subwoofer input:  
“DVD” → “FM” → “AM”
- 6** VOLUME +/- buttons (93)

### Centre unit display

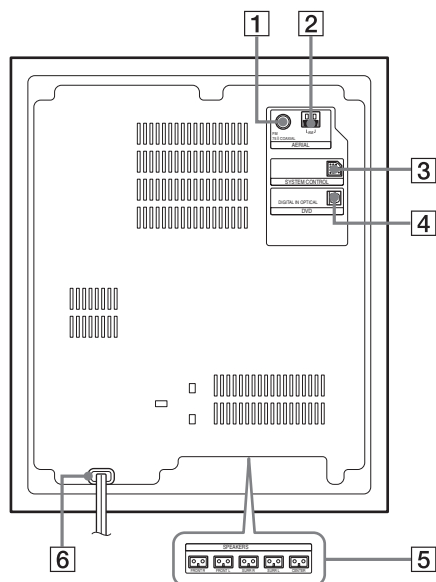
The centre unit display is for radio and speaker system adjustments. Check the following indicators as you make changes. For details, see “Checking the Status Information on the Centre Unit Display” (page 84), and the pages in parentheses.



- 1** Current audio signal format (84)
- 2** Radio reception status (ST (stereo)/MONO (monaural)/TUNED (tuned) (96)
- 3** Current sound settings:
  - A/V SYNC (88)
  - DCS (86)
  - DSGX (87)
- 4** SLEEP indicator (97)
- 5** Displays the following:
  - Radio station/frequency/kHz (for AM)/MHz (for FM) (96)
  - Speaker settings (distance, level) (91)
  - Sound field (85)
  - Function name (51, 96)
- 6** Indicates the speaker you are adjusting (distance and level). (91)



## Subwoofer (rear)



- 1 AERIAL (FM 75Ω COAXIAL) jack (17)
- 2 AERIAL (AM) terminal (17)
- 3 SYSTEM CONTROL jack (14)
- 4 DVD (DIGITAL IN OPTICAL) jack (18)
- 5 SPEAKERS (FRONT R/FRONT L/SURR R/SURR L/CENTER) jacks (14)
- 6 Mains lead (23)

---

# Glossary

---

## Album (page 57)

A unit in which to store MP3 audio tracks on a DATA CD. ("Album" is an exclusive definition for this recorder.)

---

## Chapter (page 56)

Sections of a picture or a music feature that are smaller than titles. A title is composed of several chapters. Depending on the disc, no chapters may be recorded.

---

## Copy protection signals (page 42)

Copy restriction set by copyright owners, etc. These signals are included in some software or TV programmes and restrict recording on this recorder.

---

## DCS (page 86)

This is the generic name of the surround sound produced by digital signal processing technology developed by Sony. Unlike previous surround sound fields mainly directed at the reproduction of music, Digital Cinema Sound is designed specifically for the enjoyment of movies.

---

## Dolby Digital (page 79)

Digital audio compression technology developed by Dolby Laboratories. This technology conforms to multi-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. Dolby Digital provides the same discrete channels of high quality digital audio found in "Dolby Digital" theatre surround sound systems.

Good channel separation is realized because all of the channel data is recorded discretely, and little deterioration occurs because all channel data processing is digital.

---

## Dolby Pro Logic II (page 85)

Dolby Pro Logic II creates five full-bandwidth output channels from two channel sources. This is done using an advanced, high-purity matrix surround decoder that extracts the spatial properties of the original recording without adding any new sounds or tonal colorations.

---

## ◆Movie mode

The Movie mode is for use with stereo television shows and all programs encoded in Dolby Surround. The result is enhanced sound field directionality that approaches the quality of discrete 5.1-channel sound.

## ◆Music mode

The Music mode is for use with any stereo music recordings, and provides a wide and deep sound space.

---

## Dolby Surround Pro Logic (page 85)

As one method of decoding Dolby Surround, Dolby Surround Pro Logic produces four channels from two-channel sound. Compared with the former Dolby Surround system, Dolby Surround Pro Logic reproduces left-to-right panning more naturally and localizes sounds more precisely. To take full advantage of Dolby Surround Pro Logic, you should have one pair of surround speakers and a centre speaker. The surround speakers output monaural sound.

---

## DTS (page 79)

Digital audio compression technology by Digital Theater Systems, Inc. This technology conforms to multi-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. DTS provides the same discrete channels of high quality digital audio.

Good channel separation is realized because all of the channel data is recorded discretely, and little deterioration occurs because all channel data processing is digital.

---

## DVD+R (page 8)

A DVD+R (read "plus R") is a recordable disc that is the same size as a DVD VIDEO. Contents can be recorded only once to a DVD+R, and will have the same format as a DVD VIDEO.

---

## DVD-R (page 8)

A DVD-R is a recordable disc that is the same size as a DVD VIDEO. Contents can be recorded only once to a DVD-R, and will have the same format as a DVD VIDEO.

---

## DVD+RW (page 8)

A DVD+RW (read "plus RW") is a recordable and rewritable disc. DVD+RWs use a recording format that is comparable to the DVD VIDEO format.

---

---

**DVD-RW (page 8)**

A DVD-RW is a recordable and rewritable disc that is the same size as a DVD VIDEO. The DVD-RW has two different modes: VR mode and Video mode. DVDs created in Video mode have the same format as a DVD VIDEO, while discs created in VR (Video Recording) mode allow the contents to be programmed or edited.

---

**DVD VIDEO (page 10)**

A disc that contains up to eight hours of moving pictures on a disc the same diameter as a CD. The data capacity of a single-layer and single-sided DVD is 4.7 GB (Giga Byte), which is 7 times that of a CD. The data capacity of a double-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD is 9.4 GB, and double-layer and double-sided DVD is 17 GB. The picture data uses the MPEG 2 format, which is a worldwide standard of digital compression technology. The picture data is compressed to about 1/40 (average) of its original size. The DVD also uses a variable rate coding technology that changes the data to be allocated according to the status of the picture. Audio information is recorded in a multi-channel format, such as Dolby Digital, allowing you to enjoy a more real audio presence. Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided on the DVD.

---

**File (page 61)**

A JPEG image recorded on a DATA CD. (File is an exclusive definition for this recorder.) A single file consist of a single image.

---

**Folder (page 61)**

A unit in which to store JPEG image files on a DATA CD. (Folder is an exclusive definition for this recorder.)

---

**Interlace format (page 78)**

Interlace format shows every other line of an image as a single “field” and is the standard method for displaying images on television. The even number field shows the even numbered lines of an image, and the odd numbered field shows the odd numbered lines of an image.

---

**i.LINK (page 70)**

A digital serial interface for handling digital video, digital audio and other data in two directions between equipment having the i.LINK jack, and for controlling other equipment. “i.LINK” is a more familiar term for IEEE 1394 data transport bus proposed by SONY, and is a trademark approved by many corporations. IEEE 1394 is an international standard standardized by the Institute of Electrical and Electronics Engineers.

---

**MPEG Audio (page 80)**

International standard coding system used to compress audio digital signals authorized by ISO/IEC. MPEG 2, used on DVDs, conforms to up to 7.1-channel surround.

---

**Original (page 63)**

Titles actually recorded on a DVD-RW (VR mode). Erasing original titles frees up disc space.

---

**Playlist (page 63)**

Playback information created from the actual recordings on a DVD-RW (VR mode). A Playlist leaves the original titles as they are, and contains only the information needed to control playback. A Playlist title takes up very little disc space.

---

**Progressive format (page 78)**

Compared to the Interlace format that alternately shows every other line of an image (field) to create one frame, the Progressive format shows the entire image at once as a single frame. This means that while the Interlace format can show 25-30 frames/50-60 fields in one second, the Progressive format can show 50/60 frames in one second. The overall picture quality increases and still images, text, and horizontal lines appear sharper.

---

**Title (page 56)**

The longest section of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software.

---

**Track (page 56)**

Sections of a picture or a music feature on a VIDEO CD, CD, or DATA CD (the length of a song). (Track is an exclusive definition for this recorder.)

# Language Code List

For details, see page 79.

The language spellings conform to the ISO 639: 1988 (E/F) standard.

Language	Code	Language	Code	Language	Code	Language	Code
Abkhazian	6566	Galician	7176	Marathi	7782	Tatar	8484
Afar	6565	Georgian	7565	Moldavian	7779	Telugu	8469
Afrikaans	6570	German	6869	Mongolian	7778	Thai	8472
Albanian	8381	Greek	6976	Nauru	7865	Tibetan	6679
Amharic	6577	Greenlandic	7576	Nepali	7869	Tigrinya	8473
Arabic	6582	Guarani	7178	Norwegian	7879	Tonga	8479
Armenian	7289	Gujarati	7185	Oriya	7982	Turkish	8482
Assamese	6583	Hausa	7265	Punjabi	8065	Turkmen	8475
Aymara	6588	Hebrew	7387	Pashto; Pushto	8083	Twi	8487
Azerbaijani	6590	Hindi	7273	Persian	7065	Ukrainian	8575
Bashkir	6665	Hungarian	7285	Polish	8076	Urdu	8582
Basque	6985	Icelandic	7383	Portuguese	8084	Uzbek	8590
Bengali; Bangla	6678	Indonesian	7378	Quechua	8185	Vietnamese	8673
Bhutani	6890	Interlingua	7365	Rhaeto-Romance		Volapük	8679
Bihari	6672	Irish	7165		8277	Welsh	6789
Breton	6682	Italian	7384	Romanian	8279	Wolof	8779
Bulgarian	6671	Japanese	7465	Russian	8285	Xhosa	8872
Burmese	7789	Javanese	7487	Samoan	8377	Yiddish	7473
Byelorussian	6669	Kannada	7578	Sanskrit	8365	Yoruba	8979
Cambodian	7577	Kashmiri	7583	Scots Gaelic	7168	Zulu	9085
Catalan	6765	Kazakh	7575	Serbian	8382		
Chinese	9072	Kirghiz	7589	Serbo-Croatian	8372		
Corsican	6779	Korean	7579	Shona	8378		
Croatian	7282	Kurdish	7585	Sindhi	8368		
Czech	6783	Laothian	7679	Singhalese	8373		
Danish	6865	Latin	7665	Slovak	8375		
Dutch	7876	Latvian; Lettish	7686	Slovenian	8376		
English	6978	Lingala	7678	Somali	8379		
Esperanto	6979	Lithuanian	7684	Spanish	6983		
Estonian	6984	Macedonian	7775	Sundanese	8385		
Faroese	7079	Malagasy	7771	Swahili	8387		
Fiji	7074	Malay	7783	Swedish	8386		
Finnish	7073	Malayalam	7776	Tagalog	8476		
French	7082	Maltese	7784	Tajik	8471		
Frisian	7089	Maori	7773	Tamil	8465		

# Area Code List

For details, see page 82.

Code Area		Code Area		Code Area		Code Area	
AF	Afghanistan	FI	Finland	LY	Libya	SG	Singapore
AN	Netherlands	FJ	Fiji	MA	Morocco	SI	Slovenia
	Antilles	FR	France	MC	Monaco	SK	Slovak
AR	Argentina	GB	Great Britain	MN	Mongolia		Republic
AT	Austria	GL	Greenland	MV	Maldives	SN	Senegal
AU	Australia	GR	Greece	MX	Mexico	SV	El Salvador
BE	Belgium	HK	Hong Kong	MY	Malaysia	TH	Thailand
BO	Bolivia	HM	Heard and McDonald	NG	Nigeria	TR	Turkey
BR	Brazil		Islands	NL	Netherlands	TW	Taiwan
BT	Bhutan	HR	Croatia	NO	Norway	UA	Ukraine
CA	Canada	HU	Hungary	NP	Nepal	UG	Uganda
CG	Congo	ID	Indonesia	NZ	New Zealand	US	United States
CH	Switzerland	IL	Israel	OM	Oman	UY	Uruguay
CL	Chile	IN	India	PA	Panama	UZ	Uzbekistan
CN	China	IT	Italy	PH	Philippines	VN	Vietnam
CO	Colombia	JM	Jamaica	PK	Pakistan	ZA	South Africa
CR	Costa Rica	JP	Japan	PL	Poland	ZW	Zimbabwe
CZ	Czech Republic	KE	Kenya	PT	Portugal		
DE	Germany	KH	Cambodia	PY	Paraguay		
DK	Denmark	KR	South Korea	RO	Romania		
EC	Ecuador	KW	Kuwait	RU	Russian Federation		
EG	Egypt	LK	Sri Lanka	SA	Saudi Arabia		
ES	Spain	LU	Luxembourg	SE	Sweden		
ET	Ethiopia						

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Words in brackets appear in the on-screen displays.

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